



Noah's Ark

Full plans to build.
Final Size 31" wide, 15" deep and 17" high.

These plans should print full size on A3 sheet paper.
Make sure there are NO margins.



Noah's Ark

This unique project is great for play, for display, or use as an instructional aid for young folks. The Ark is based on the Biblical story of Noah, his wife and three sons and their wives along with a variety of birds and animals. All patterns are full size though some are half-patterns. There are 28 pair of birds and animals. The spacious ark has a door/ramp that opens for arriving animals. The whole front of the ark tips down to reveal two levels of animal housing including several corrals. Wood containers can be added along with bundled hay for the animals. A ladder leads to an upper loft. The house on top is in two sections and both lift off to reveal more stalls and two bird perches. A surprise is when the cupola on top is tipped to the side a colorful rainbow rises skyward. A matching cupola appears beneath the rainbow with a dove perched on top holding an olive branch from discovered land. The Noah's Ark project is nearly all wood. A few easy to find hinges, brads, screws, dowels, cord etc. will be needed and are listed in assembly steps. Also, buckets, barrels and other excessories can be purchased. Rainbow coloring ideas are included. This is an ambitious project but will yield a woodworking treasure.

Material: The hull of the ark is designed as an elongated bowl. Both sides of the hull are the same with the exception the face side folds open and a door/ramp is cut in the middle. Eleven-3/4" thick, log like strips make up the front hull, eleven more for the back. Both the front and back hull sections fit on a single base, level #1. The two hull sides will mount against a left and right end post, both 1 1/2" thick (figs. 37 & 38, PAGE SIX). Each of the "U" shaped strip is different. If using pine for the hull, acquire four- 8' long boards, 10" wide x 3/4" thick or the hardwood equivalent planed precisely to 3/4" thick (see fig. 12, PAGE THREE). Avoid gluing smaller stock pieces together when making the strips so the grain along the hull will be fairly consistent. Pick stock somewhat free of knots and excessive blemishes. The "U" or bow shaped strips will be temporarily assembled with hot glue, the outer surface shaped to be smooth then taken apart to add detail. Then the sides will be permanently glued together. Other stock to have on hand includes 1/4", 3/8" and 1/2" thick quality plywood such as Baltic birch. Less than a quarter sheet each will be needed. Or use solid hardwood stock planed to those thicknesses. A 3/8" thick deck fits inside the hull near the top and supports the house and hidden rainbow. The rainbow pivots between two walls that also serve as the back walls for the house (PAGE SEVEN). Extras can embellish the interior including timber frame walls with bird perches on top, fenced corrals, a ladder, plus the animals and Noah's family. Overall size of the ark is 31" wide x 15" deep x 17" high. Even though the plans hold federal copyrights, it is allowed to make photo-copies of the patterns. The originals can then be preserved for reference. Most patterns are full size though some are half or quarter "mirror image" patterns requiring taping copies together to make the full pattern. Some copiers (or copy centers) may be capable of making a mirror (reverse) image for the second pattern half needed for many parts on the Ark. That will avoid having to trim the second pattern to the line (fig. 22, PAGE FIVE). Apply pattern copies to stock prepared to the thickness noted on the pattern using a spray adhesive like 3M General Purpose 45 sprayed on the backs of the pattern copies. Make modifications if wanted to simplify or enhance the project. If the Ark is to be handled by children, sand thoroughly and watch that small children are supervised around the small parts and hinged areas that can pinch. The patterns for the hull's base (part #1) and the 11 side strips are on PAGES THREE, FOUR & FIVE.

Tools: Common shop tools are needed including a table and/or radial arm saw, a band saw and/or scroll saw, a saber saw, coping saw, etc. A 1/4" wide band saw blade is fine for most cuts though a 1/8" wide blade may be helpful for finer detail. Other tools include a 3" or 4" belt sander, 1" belt sander, orbital sander, a small drum sander, a brad gun, drill press with assorted standard drill bits, and a router with a 1/2" round over bit and a chamfer bit. Also have on hand assorted wood clamps, a compass, degree gauge, measuring tools, and other assorted hand tools (see various steps). A glue gun, wood glue and sanding supplies will be needed. The ark can be painted or apply a lacquer finish. It will be helpful to read ahead and look over the drawings and patterns to become familiar with upcoming steps and materials and tools needed. Please exercise proper safety while operating power tools.

Construction

Consider a lighter wood color for the hull and darker wood color for the base (level #1), the two end posts and the 3/4" boarder trim that goes across the top of both sides of the ark (fig. 1). Make four copies of the quarter pattern for the ark's base, level #1 in fig. 15 (PAGE THREE). Follow the information there and cut the base from 3/4" thick stock. Route around the underside except for the flat ends where end posts will attach.

Follow the pattern in fig. 19 on PAGE FOUR and cut two end posts from 1 1/2" thick stock. See routing information there.

Look over the information in fig. 22 on PAGE FIVE then make copies of strip patterns for the two sides of the hull. The patterns are on PAGES THREE, FOUR & FIVE. Prepare all the strip patterns before cutting. If using patterns again for the second part of the hull use only enough adhesive to hold the pattern in place during cutting, but light enough so the patterns can be removed and reused.

Because the strip patterns are thin it is important to place them on 3/4" thick stock with the right span from one end to the other. Note the span distance printed on each pattern. If it is needed, readjust the pattern so the spread is within 1/8" of the noted distance. Also note that copy machines can vary making copies slightly smaller or larger than the original. It may help to lay the patterns out on stock beforehand for the best use of wood (fig. 12, PAGE THREE). The hull strip's lengths and depths vary so trying them in different positions may maximize the use of wood. It is very important, even before the pattern is removed to write the strip number on both (flat) ends of each strip. See figs. 13 & 14 on PAGE THREE. Mark the strips for the face of the ark with one color and the back strips with another color. The reference number is important during some strip alterations and so they are stacked in the right order. Make all 22 hull strips.

With the base, stem and stem and 22 strips complete proceed to text on PAGE SIX



Fig. 1



Fig. 2

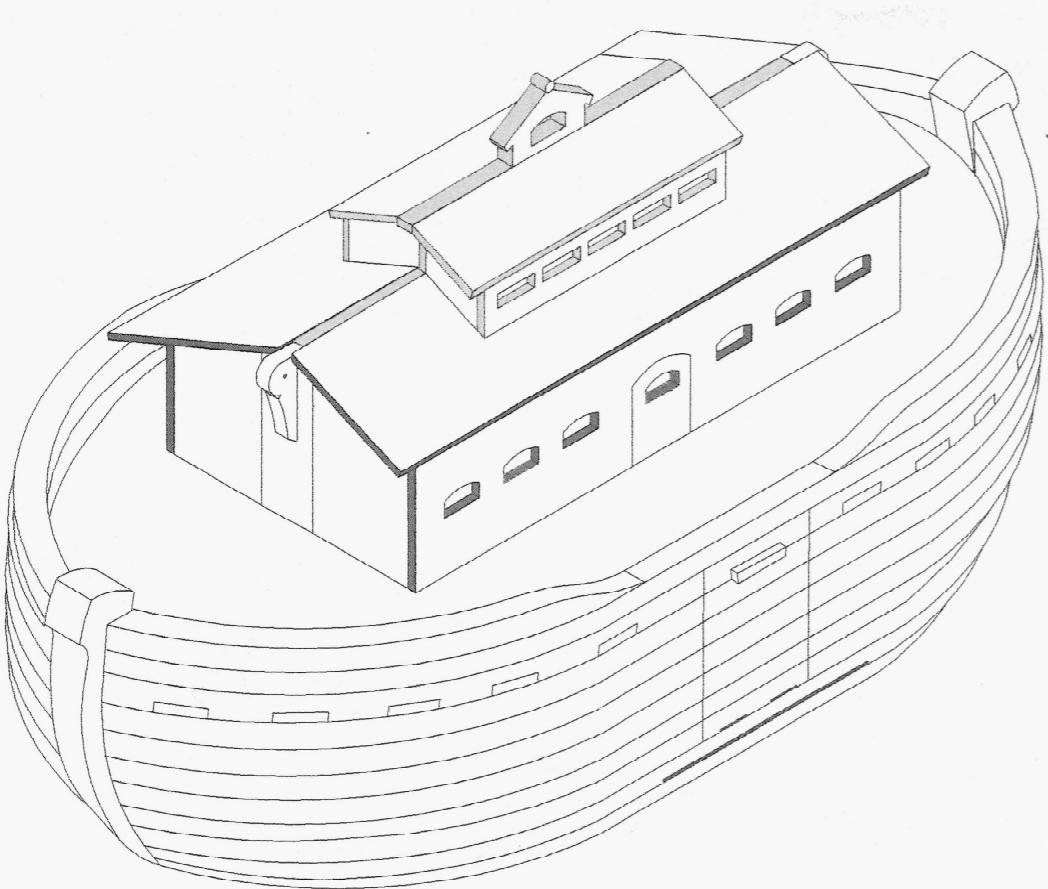


Fig. 3

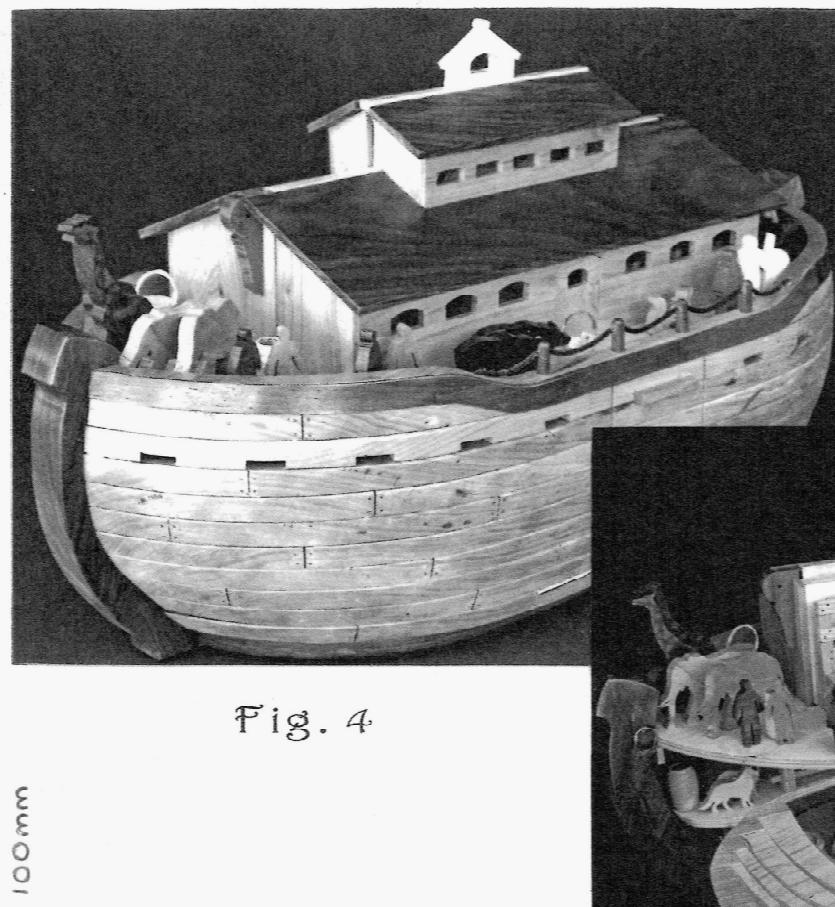


Fig. 4

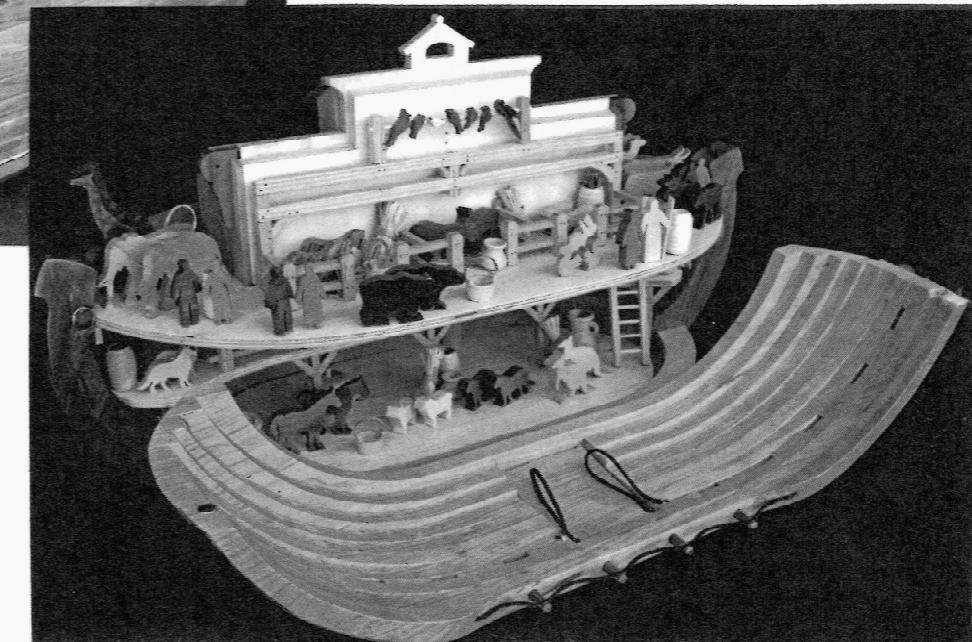


Fig. 5

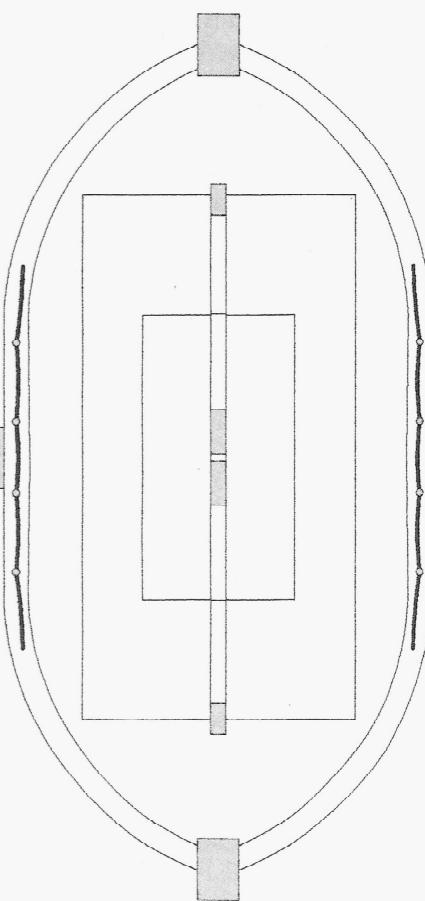


Fig. 8

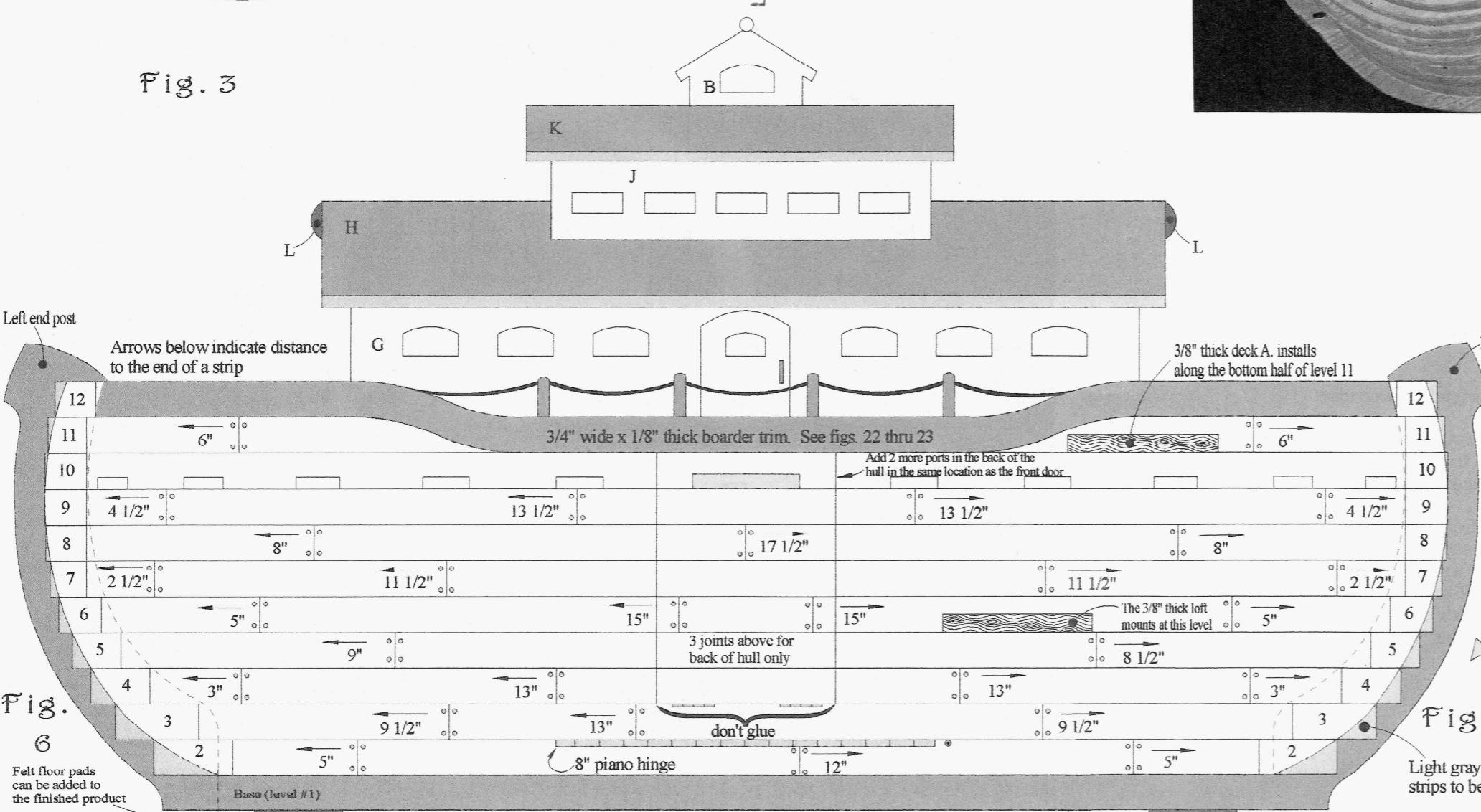
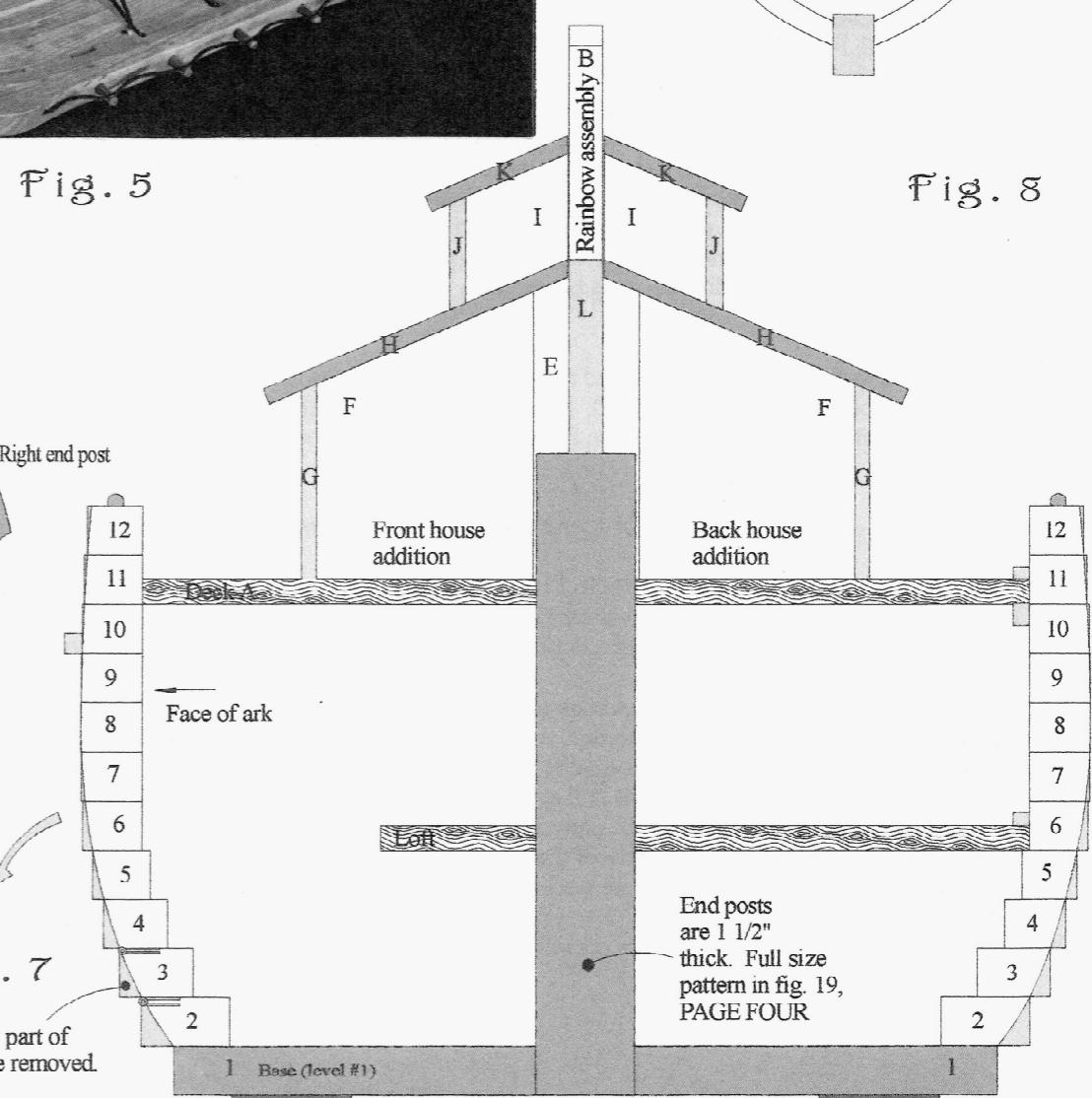


Fig. 6

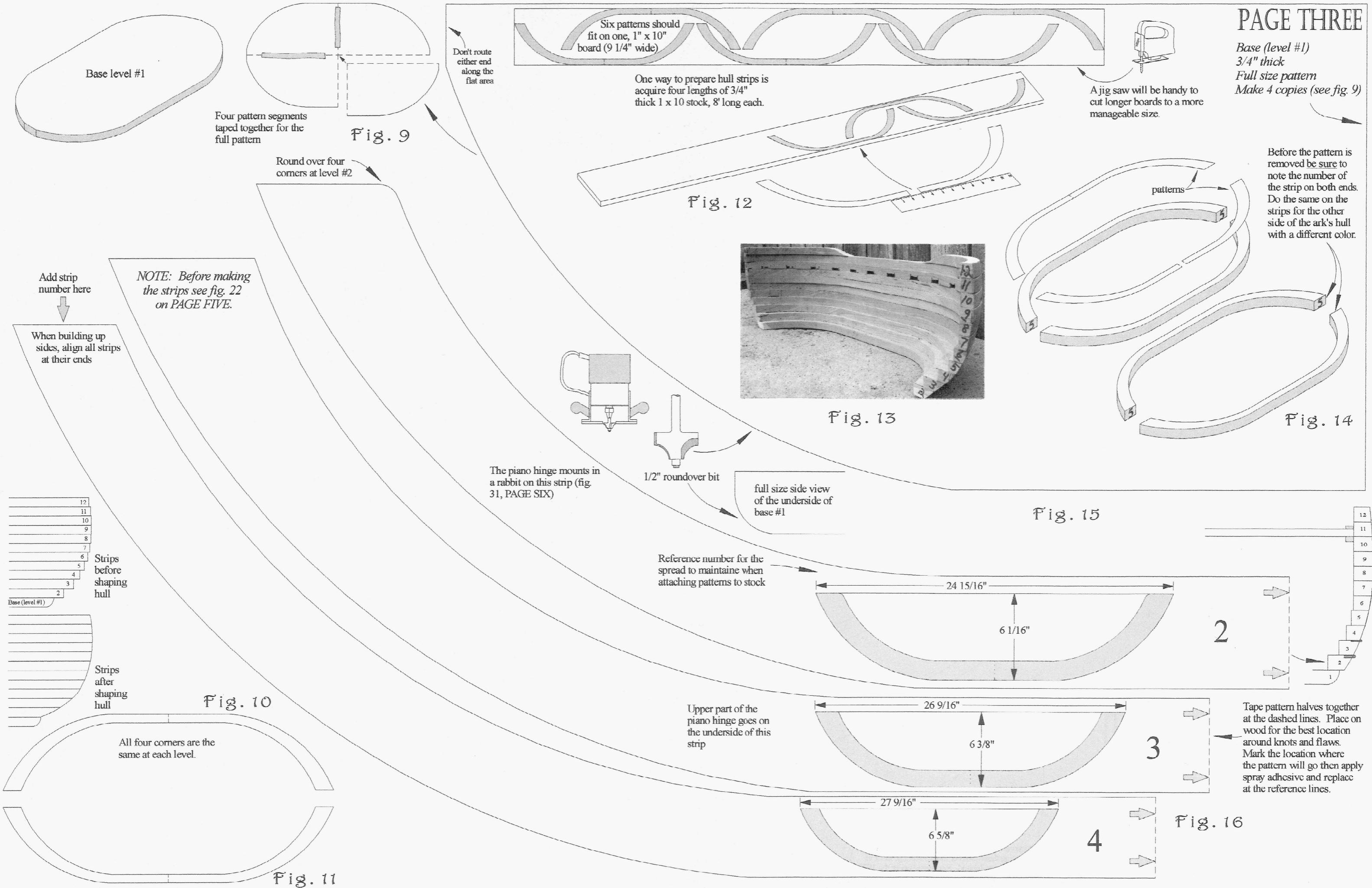
Fig. 7

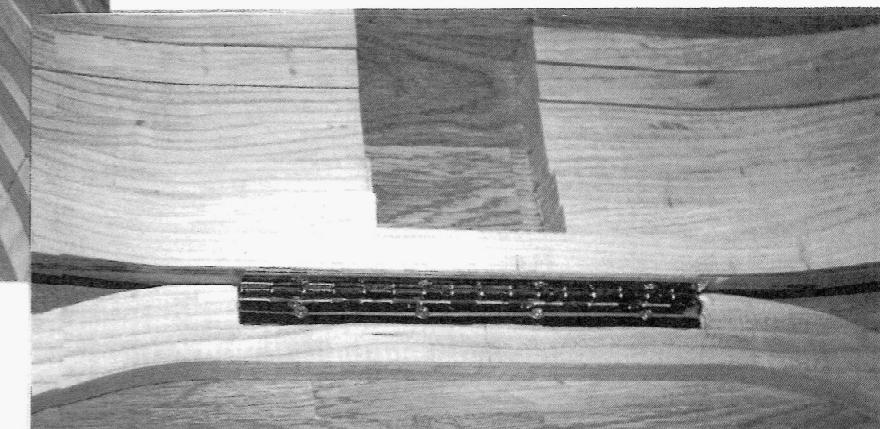
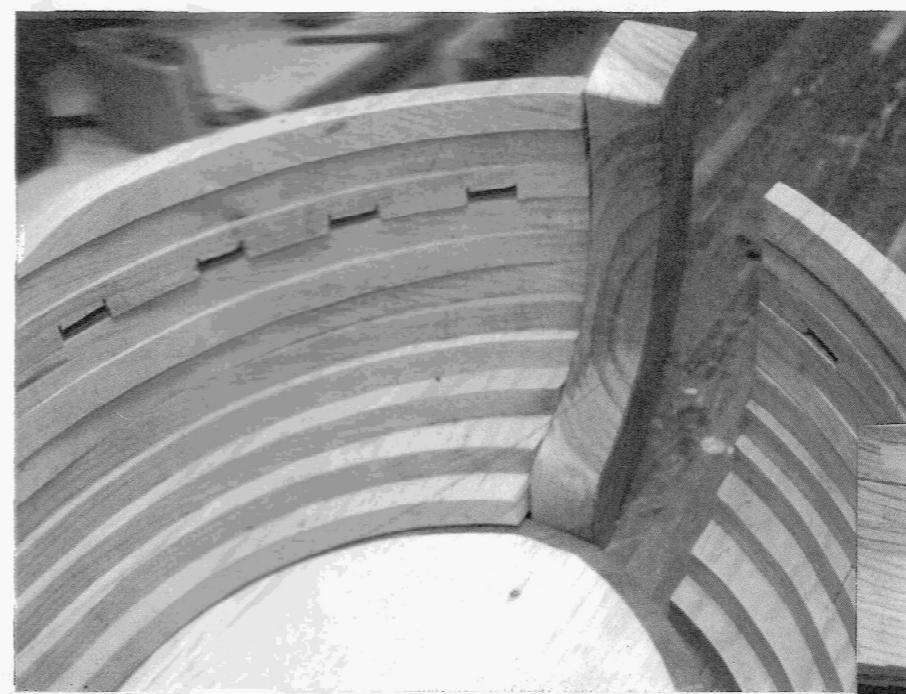
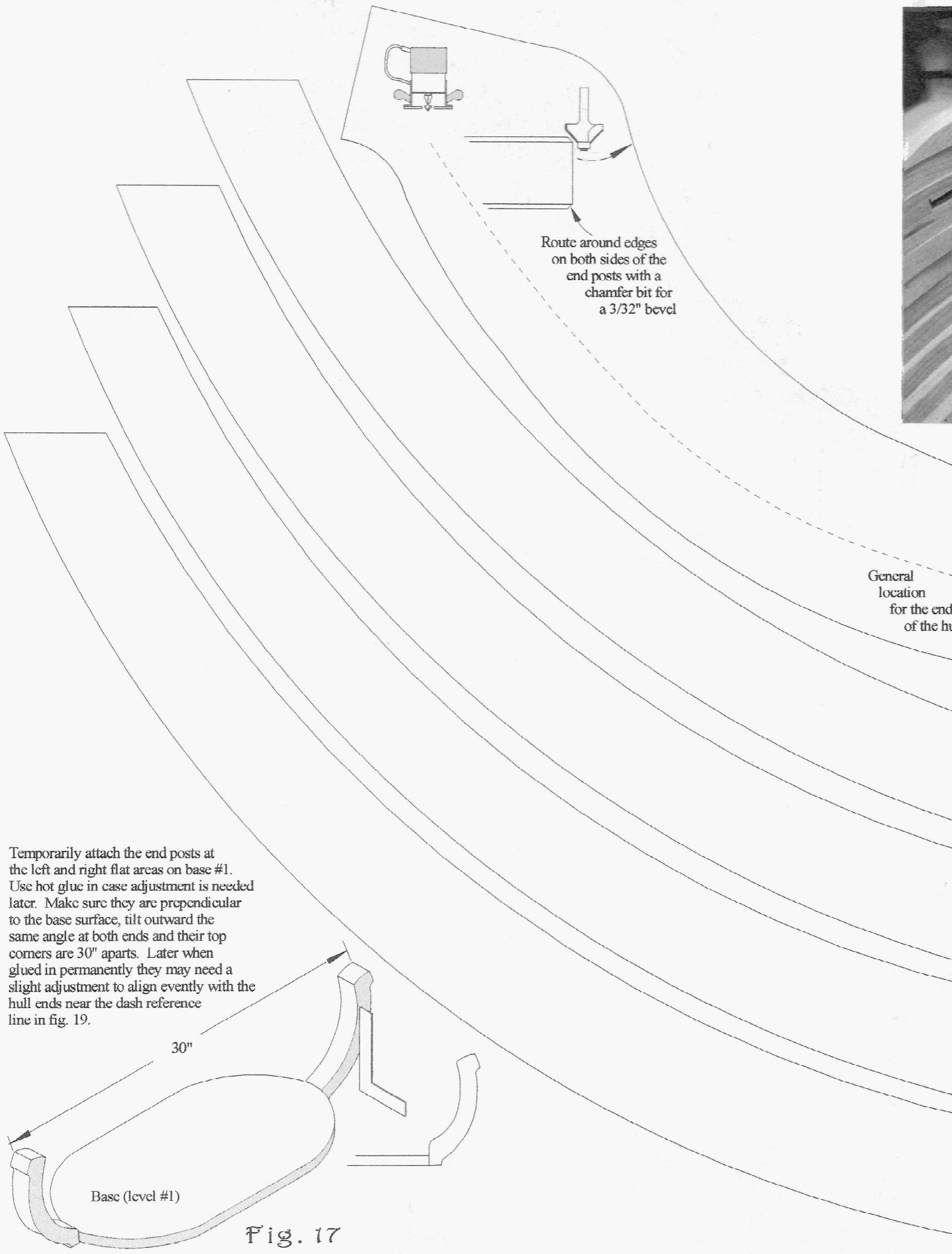


PAGE THREE

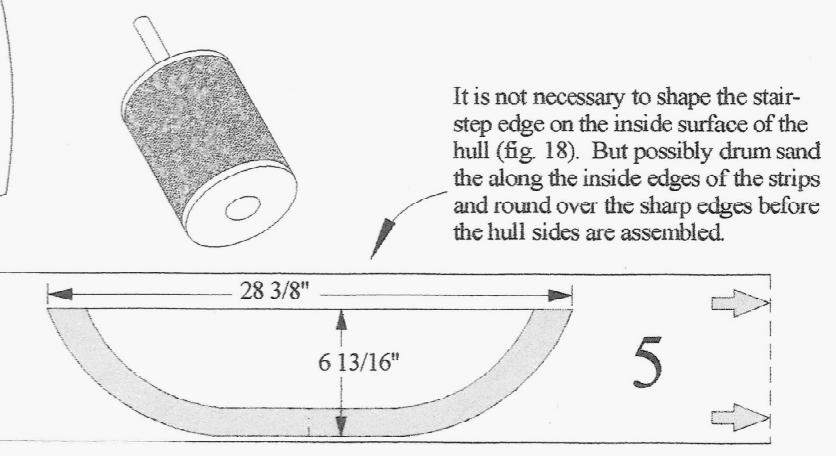
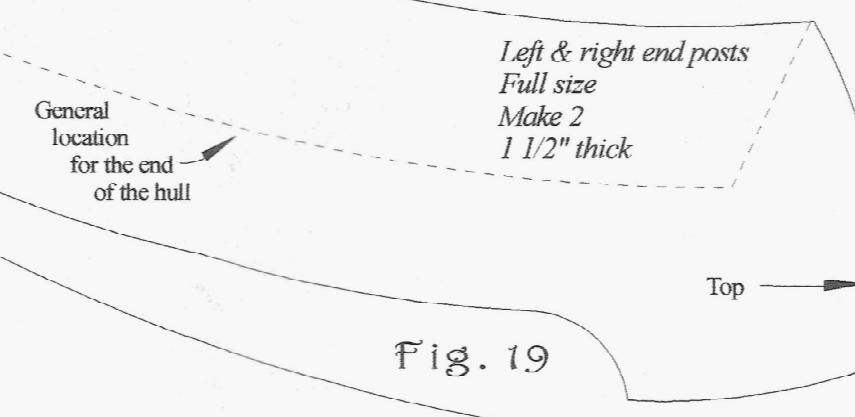
Base (level #1)
3/4" thick
Full size pattern
Make 4 copies (see fig. 9)

Before the pattern is removed be sure to note the number of the strip on both ends. Do the same on the strips for the other side of the ark's hull with a different color.

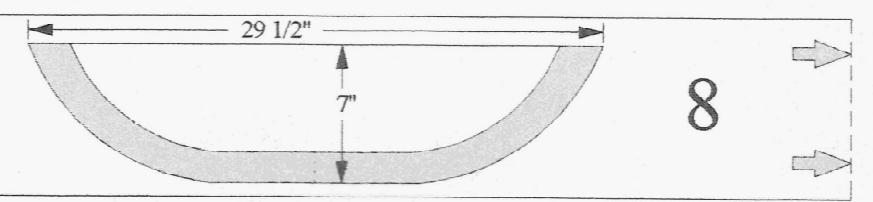




Inside view of the hull showing the door/ramp cut in the hull's face side. Also shown is the bottom wing of an 8" piano hinge installed in a rabbet in strip #2 and the top wing attached to strip #3. The hull base is not in place.



The loft aligns
at this level



It is not necessary to shape the stair-step edge on the inside surface of the hull (fig. 18). But possibly drum sand the along the inside edges of the strips and round over the sharp edges before the hull sides are assembled.

The gray pattern below is used for two procedures on the hull. First it is used as a guide to mark strip #12 for removing the center part of the strip (fig. 25 below). Center the pattern on the strip, trace onto strip #12 and cut. Repeat on strip #12 on the other side of the hull. The second use of this pattern is to combine it with the pattern extensions in fig. 23. See fig. 24. It will be used later for making a 1/8" thick decorative boarder for across the top on both sides off the hull (figs. 1 & 6).

Fig. 22

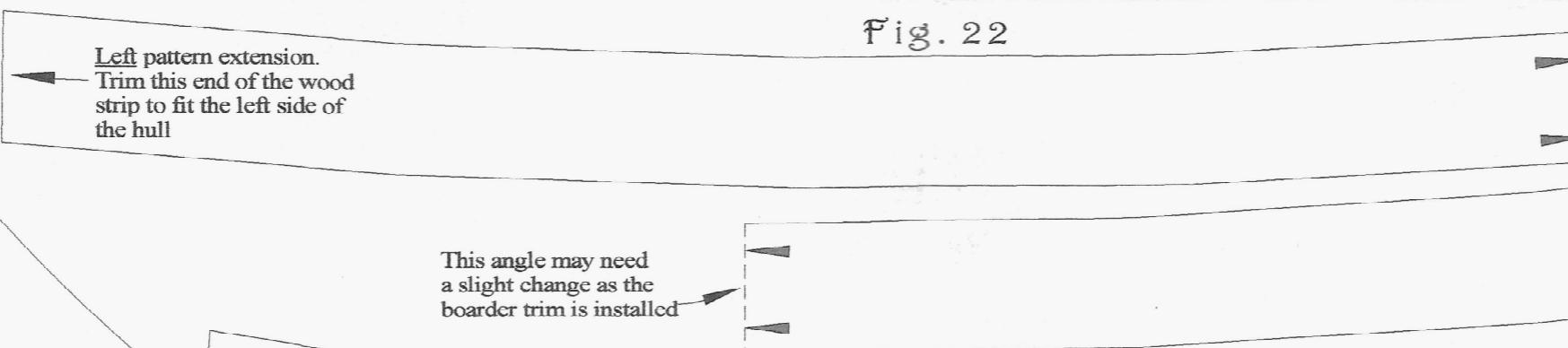


Fig. 23

This angle may need a slight change as the boarder trim is installed

Right pattern extension.
Trim this end of the wood strip to fit the left side of the hull

Fig. 24

Though the 1/8" thick boarders along the top of the hull (on both sides of the ark) could be made as one long strip, it will be easier to make them in three segments (matching the patterns). Then if a slight angle change is needed along this curved hull surface, the joints where the parts meet could be changed slightly for a better fit.

PATTERN PREPARATION
There are eleven- 3/4" thick strips making up the front of the hull, eleven more in the back. Two "half" patterns are needed to make a full strip pattern. With care a pattern can be used again for the matching number strip on the other side. Make 11" x 17" copies of the "half" patterns on PAGE TWO, THREE & FOUR. If an 11" x 17" reversible copy machine is available, make matching mirror image copies. Cut out the two corresponding patterns, for example a left and right pattern for level 2 and tape together at the dashed line. Otherwise make two copies of a page. Trim out one pattern just outside the pattern line leaving the line to cut to (see below) then cut out the matching pattern cutting exactly to the line. Flip that pattern over and align the two patterns at their ends (dashed lines and arrows). Possibly place on stock beforehand to find the best location then mark with a pencil. Apply spray adhesive and place back at the marked points. Double check for the correct spread of the pattern and cut.

Pattern trimmed from copy

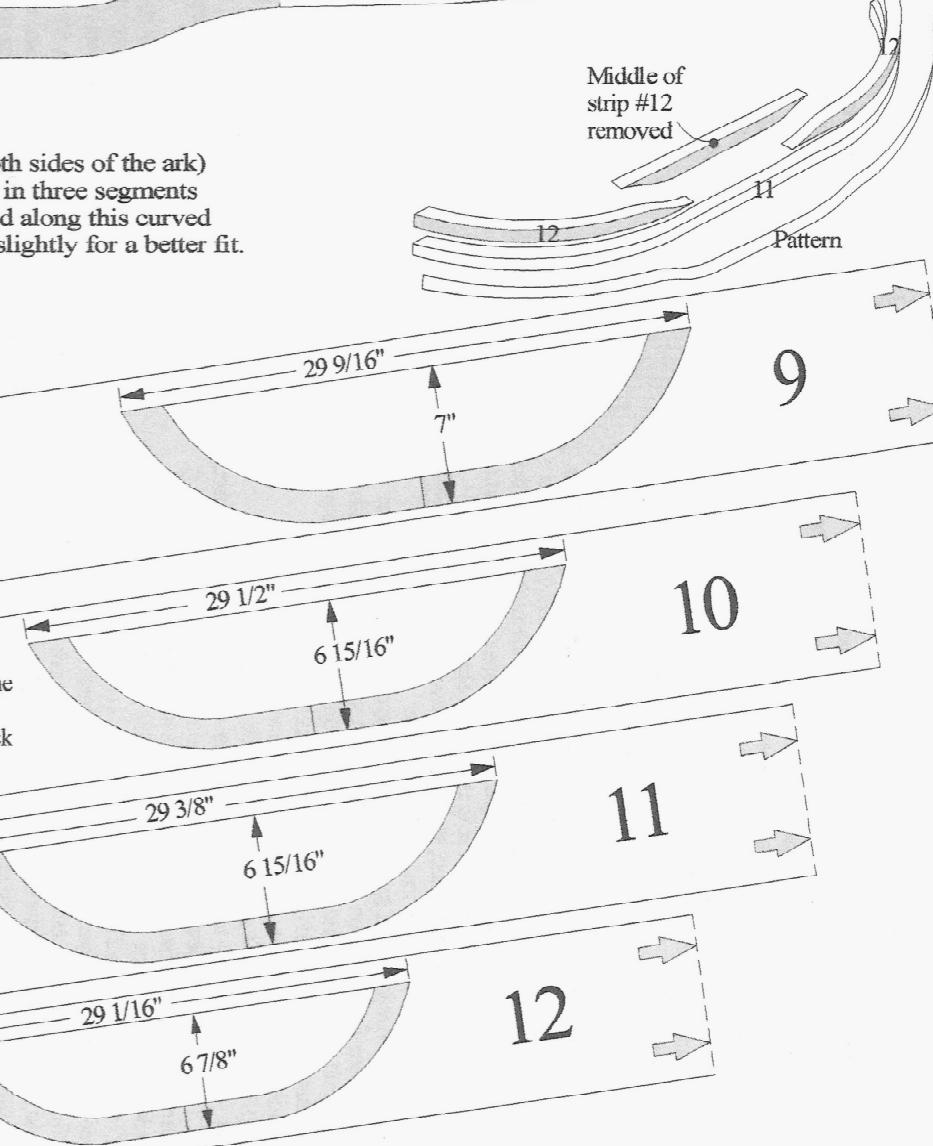
Pattern trimmed to the line

Fig. 22

The middle is removed from both #12 strips leaving contoured ends.

Fig. 25

Rectangular ports are cut in the bottoms of both #10 strips. Cut ten ports in the #10 strip for the face of the hull and twelve in the strip for the back of the hull. There are no ports where the fold down door/ramp will go. Two additional ports are cut in the back in the same location as the front door (see to the left). See the pattern in fig. 62, PAGE NINE.



With the base (level #1) and side strips #2 thru #12 for both sides of the hull prepared, you are ready to temporarily assemble the hull sides to sculpt for a smooth, even bowl like surface. It is not necessary to smooth the stair-stepped surface on the inside of the hull. Since the strips for the face side of the hull have a matching strip in the back, you might exchange strips where a better one from the back would look nicer. Avoid objectionable knots and use the best wood color and even grain. Hot glue sides #2 thru #12 together for both sides of the hull (figs. 26 & 28). The base (level #1) will be attached later. Place small dabs of hot glue, about 3/8" in diameter around five points on each strip. Testing with scrap wood beforehand will give an idea of the holding ability. Strive for a good hold for the rigorous shaping process ahead but yet so the strips can be separated afterwards. Depending on the wood used, some splintering could occur at the hot glue points during separation but should not show on the exposed surfaces. It is important each strip is centered left to right with the previous strip (right in fig. 26) and flush at the flat ends (fig. 28). You should be able to place a glued hull against a flat surface with all the ends meeting the surface evenly. Glue the other side of the hull together in the same way. It is important as you hot glue the second hull half that each strip is checked against the previous side so when all the strips are glued, the two hull halves can be placed against each other and be mirror images of each other. The next appearance at the joints and modify top strip #12. An assortment of tools can be used to make a holding jig like the one in figs. 29 & 30. A full size pattern is not shown. Make it similar to the image in fig 29 so it supports the ends of a hull half and so the outer edges of the glued strips extend beyond the jig. Screw or clamp so it overhangs the front of the work surface. This holds the hull in place for rigorous work and helps hold the temporarily glued joints together. Experiment with hand planes, a spokeshave, rasps etc. A belt sander with 40, 60 or 80 grit sandpaper works well to round down the stair steps. The middle of the hull will need less work as the stair step strips are not as prominent. Toward the ends it will need more shaping. Possibly begin with the hull side that will be in the back of the Ark to get the feel of the process then finish with the face side. An orbital sander with 40 grit paper can be used for final evening. Watch the underside of strip #2 not to remove too much material. Strive for an even width along the flat surface on the underside of strip #2. Likewise watch that the top of strip #12 is left similarly even. In the event the hot glued laminating separates, apply more hot glue and position back in place accurately. Sand the hull surface smooth with 100 to 220 grit paper depending on how smooth you want the exterior.

The strips can now be separated for modifying before the hull is glued together permanently. Separate strips, starting at one end, gently separate an end possibly with a single edge razor at a glue joint. Work a chisel in and gently pry to the other end. Stubborn glue points can be separated with a sharp chisel lightly tapped in from the inside surface of the hull. Scrap off hot glue with a razor or chisel.

Both of the separated strips will be processed the same with the exception on the face side a hinge added so it can swing open and a door/ramp will be cut in the side. Use a sharp, small hand plane and/or a sanding block and round over the top and bottom outer edges of all strips so they look like fig. 34. Strive for a gap about 3/32" wide when two adjoining strips are together. This will give a log look to the sides of the ark (fig. 1).

Stimulated joints can be added at the points shown in fig. 6 on PAGE TWO. Make these by cutting a vertical saw cut (kerf) in the strip about 1/8" deep. Then drill two holes on each side for stimulated dowels. It will give an appearance of two logs joined end to end and pinned with dowels. Fig. 6 shows the random joint locations. The number (in inches) next to each joint is the distance to the nearest end of a strip. Keep track of the strip number to be sure you are working with the correct strip. Fig. 40 shows a full size pattern of a joint with dowel locations. Make a copy of the pattern to place at the measured points on a strip then mark where the saw cut will go and mark with a sharp awl where the dowel holes should go. Drill with a 5/64" diameter bit about 3/16" deep at the four points. If using a darker colored wood for the hull like walnut or mahogany, round centered (birch) toothpicks can be used as dowels. Cut off about 1/4" from the end of the toothpick then press-fit it into the hole. No glue is needed. Cut off the toothpick about 1/16" from the surface then sand even with the surface using a block sander. For light colored wood, the dowels could be made from walnut, mahogany or something similar. See fig. 40. Cut wood stock on a band saw or scroll saw to near 3/32" square then sand the corners down to be generally round and the size of the dowel holes. It can help to slide a panel of 1/4" thick hardboard or a similar into the saw blade to cover the blade hole and clamp while cutting these fragile dowel strips. Check for the fit in the drilled hole and if necessary sand down then press fit in the hole. Cut off and sand. No stimulated joints go in the door/ramp. Add the joints in the strips for the back of the hull at three additional locations (same region as the face side door) shown in fig. 6.

ASSEMBLING THE HULL. Start at the back hull. With the left and right end posts still attached with hot glue, glue back hull strip #2 down on base #1 but do not put glue on the ends of the strip where it contacts the end posts (see drawing to the right). Just a narrow edge along strip #2 contacts the outer edge of the base. Then continue to add strips up to strip #9 watching that each strip is centered and up against the end posts. 1" brads can be installed for reinforcement but mostly along the straight part of a strip. Some woods may split when nailing out at the ends where the grain runs across the strip. See to the right in fig. 32. Otherwise, clamp strips and let dry as each strip is added. Clean up any glue squeeze-out with a damp rag.

As strips are reassembled permanently, the surface should be smooth and even all the way up. Stop when strip #9 is in place. At this point strip #10 has rectangular ports cut along its bottom edge. Place it centered on the top of strip #2 (see in fig. 7). Outline where the hinge is to go then possibly use a 5/8" diameter Forstner bit to drill in the marked area to the depth of the folded hinge. Neatly chisel out the rest of the rectangular and install the hinge with the included screws. Center strip #3 exactly over strip #2 and aligned out at the strip's end. Install the other wing of the hinge. Possibly beforehand apply a little hot glue to the top of the hinge for a temporary hold as strip #3 is set on strip #2. Then gently tip #3 up and mark screw locations with a sharp awl dead center where the screws are to go (see photo in fig. 18). Remove the hot glue, pre-drill then install screws. The two strips should close neatly against each other with no gaps along the joint. Glue strip #2 down on the forward edge of base #1 and up against the left and right end posts. Align strips #2 & 3 so they are centered on the base and directly across from the hull's back strips.

Purchase a standard piano (continuous) hinge at least 12" long x 1 1/16" wide and cut off a length 8" long. Place it centered on the top of strip #2 (see in fig. 7). Outline where the hinge is to go then possibly use a 5/8" diameter Forstner bit to drill in the marked area to the depth of the folded hinge. Neatly chisel out the rest of the rectangular and install the hinge with the included screws. Center strip #3 exactly over strip #2 and aligned out at the strip's end. Install the other wing of the hinge. Possibly beforehand apply a little hot glue to the top of the hinge for a temporary hold as strip #3 is set on strip #2. Then gently tip #3 up and mark screw locations with a sharp awl dead center where the screws are to go (see photo in fig. 18). Remove the hot glue, pre-drill then install screws. The two strips should close neatly against each other with no gaps along the joint. Glue strip #2 down on the forward edge of base #1 and up against the left and right end posts. Align strips #2 & 3 so they are centered on the base and directly across from the hull's back strips.

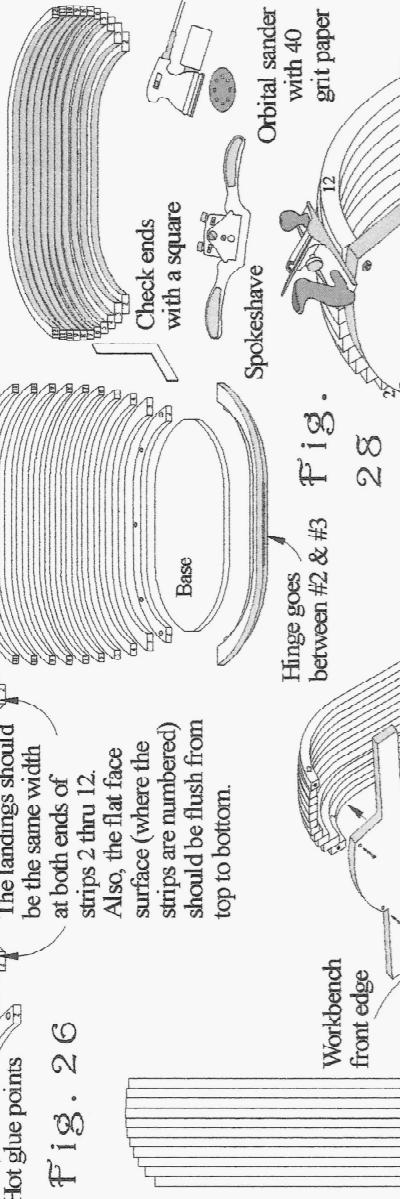


Fig. 26

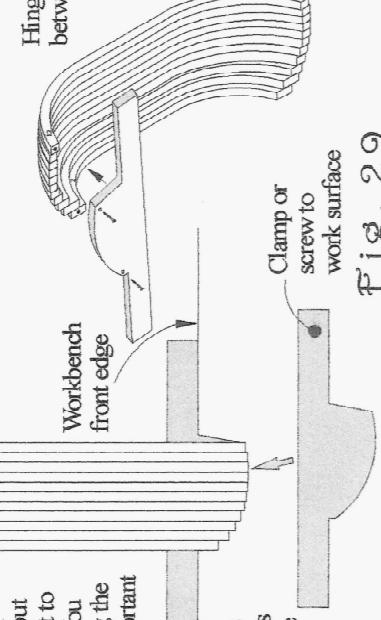


Fig. 29

The part above is the general shape of a possible jig. No pattern is included. It can be screwed or clamped down to the work surface with the ends of the hull strips hanging over the edge for easy access for planes, belt/disc sanders, etc.



Fig. 31

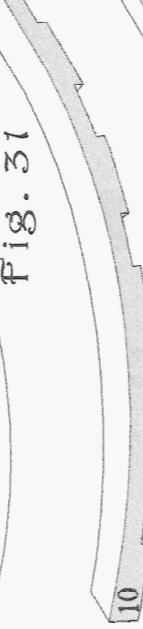


Fig. 32

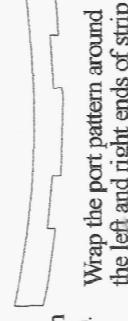


Fig. 33

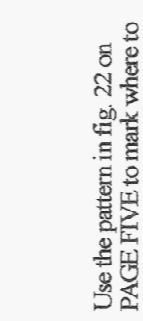


Fig. 34

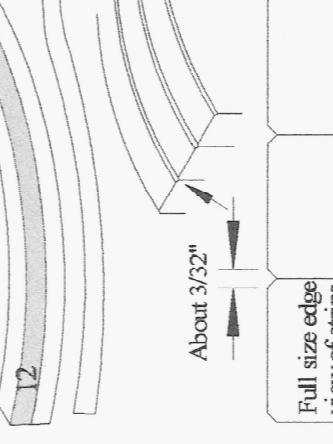


Fig. 35

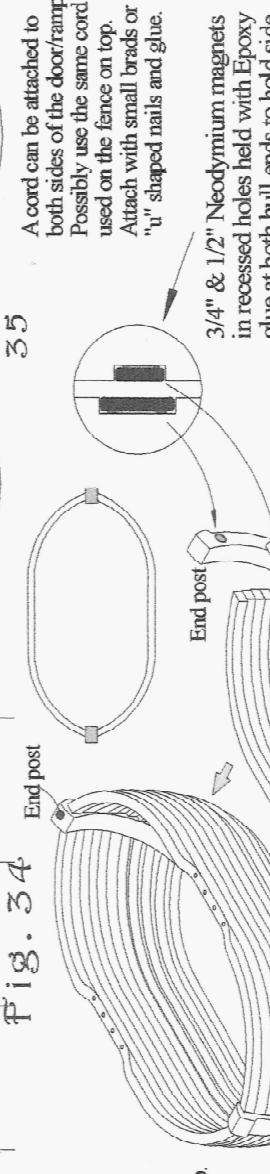


Fig. 36

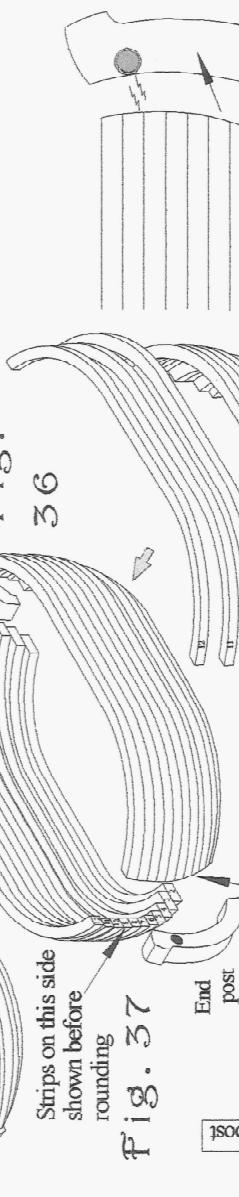


Fig. 37

Fig. 38



CONTINUE TO PAGE SEVEN

Care must be taken installing 2 screws into the ends of strips 2 and 12. Angle 1 1/4" long sheet rock or similar screws into the ends so they won't break out of the strip's side. Pre-drill to minimize splitting the narrow strips. The jig can be flipped over for the other end of the hull side. With the strips overhanging the rounded edge of the jig, the high points (stair steps) of the strips can be planed, spoke shaved, belt sanded, etc without interference from the jig or the workbench.

Fig. 28

Fig. 30 Care must be taken installing 2 screws into the ends of strips 2 and 12. Angle 1 1/4" long sheet rock or similar screws into the ends so they won't break out of the strip's side. Pre-drill to minimize splitting the narrow strips. The jig can be flipped over for the other end of the hull side. With the strips overhanging the rounded edge of the jig, the high points (stair steps) of the strips can be planed, spoke shaved, belt sanded, etc without interference from the jig or the workbench.

Fig. 30

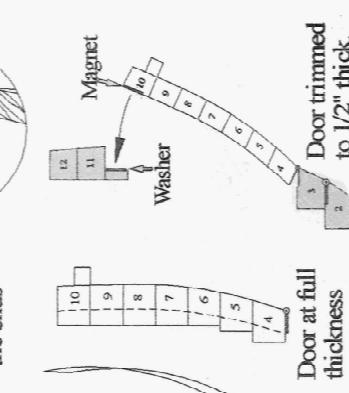


Fig. 33

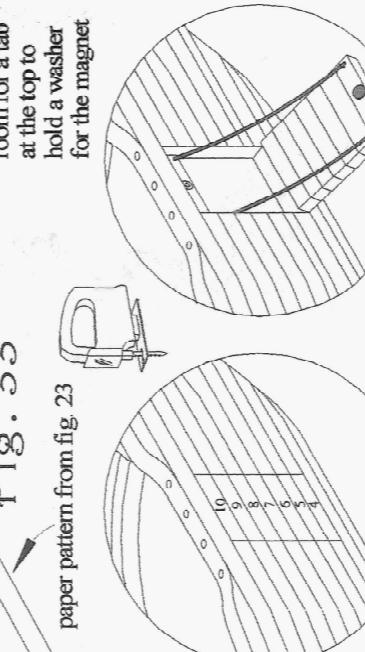


Fig. 35

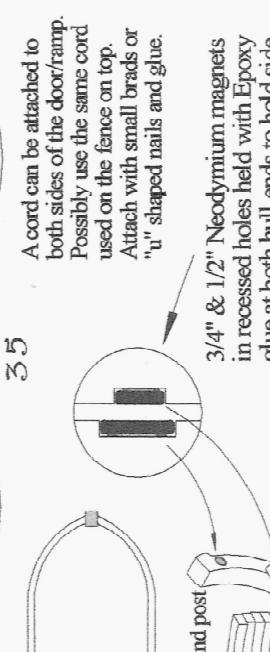


Fig. 36

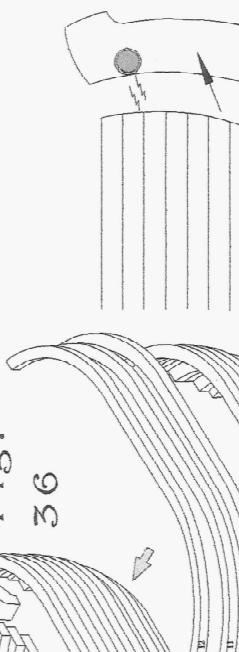


Fig. 37



Fig. 38

See text on making simulated joints for the hull strips. Use this full size drawing as a guide for dowel locations.

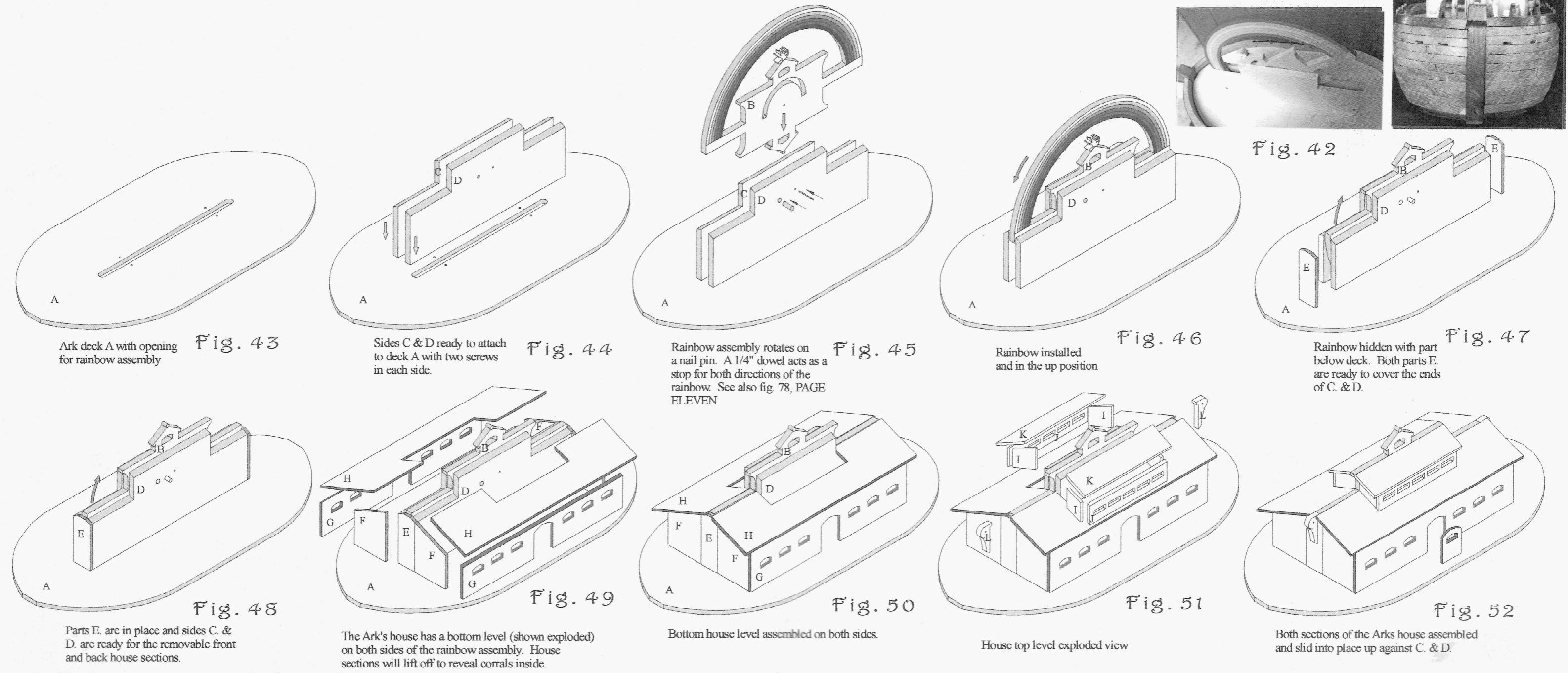
CONTINUED FROM PAGE SIX See fig. 6 on PAGE TWO showing where the door/ramp will go. When strip #4 is glued down on to strip #3, no glue goes at the point where the door is to be removed. Add a reminder to not glue on that 3 3/4" wide section. Glue strip #4 on strip #3 and continue up to and including the port strip, strip #10. Do not put brads along the area where the door sides will be cut. See fig. 6, PAGE TWO. Mark strips #4 up to strip #10 where the sides of the door/ramp should go. With the Ark on a flat surface, a square will be handy to assure perpendicular lines. See fig. 6, PAGE TWO and fig. 35 PAGE SIX). Cut with a hand or jig saw making straight cuts down to the top of strip #3. With no glue at the bottom of the door opening, the door should remove easily. Next, cut the door to be 1/2" thick by sawing 1/4" off the back (fig. 33 PAGE SIX). The thinner door is a better ramp size plus it allows a space behind the top of the door for a suggested magnet latch to secure the door shut (figs. 33 & 35). Acquire 1/2" and 3/4" diameter flat Neodymium magnets from a hardware store or the internet for both the door/ramp and the front of the ark. Or use Velcro or mechanical latches of your choice. For a magnet latch, cut a wood tab 3 3/4" long, 1/2" high and 1/4" deep. Countersink a 1/2" diameter hole in the middle of the strip deep enough for a washer about 3/8" to 1/2" diameter and glue it into the top back of the doorway. Install two 1" x 1" hinges (or similar) to the bottom of the door/ramp and on strip #3 in two mortises as deep as the closed hinge thickness (fig. 6 & 7 PAGE TWO). Drill a 1/2" diameter hole in the top rear of the door/ramp deep enough to epoxy the magnet in. The magnet hole should line up with the washer (figs. 33 & 36). The magnet and washer should make contact when the door is closed and the outside of the door should be even with the hull. Make a handle for the door 2 1/4" wide x 3/8" deep x 1/4" high. Glue to the top of the door and in line with the ports in strip #10 (fig. 2). Add cords to both sides of the door (fig. 35, PAGE SIX) around 1/8" diameter. Use a color to complement the wood colors. Use small "u" shaped nails or bend small brads and add hot glue. Attach at the door opening like in fig. 35 behind the door closed position and check that the door will close without catching on the cords. Small chains could be used as well. Glue strip #11 on to strip #10. The center section of the last strip, strip #12 has the center cut out leaving contoured ends on the remaining lengths. Study the drawing in fig. 6, PAGE TWO, figs. 22 to 23 on PAGE FIVE & Fig. 33 PAGE SIX. Use the gray pattern in fig. 22 and apply it to both strips 12, mark where to cut then remove the center section of strip #12 and discard that part. Glue the #12 strip left and right lengths left over down on strip #11 for a good alignment with strip #11 and against the end posts. When dry, it may help to run a drum sander, about 2" diameter down the contoured ends to help blend with the middle of strip #11 (fig. 33, PAGE SIX). A length of decorative trim runs along the top of both sides of the hull. Make 1/8" thick, 3/4" wide using the same pattern in fig. 22 but add the left and right extension patterns in fig. 23. In stead of one continuous piece of trim, possibly make in three lengths, the same as the patterns. The decorative strips are curved to run along strips #12 and down onto strip #11 and back up on the other length of strip #12 (fig. 6, PAGE TWO).

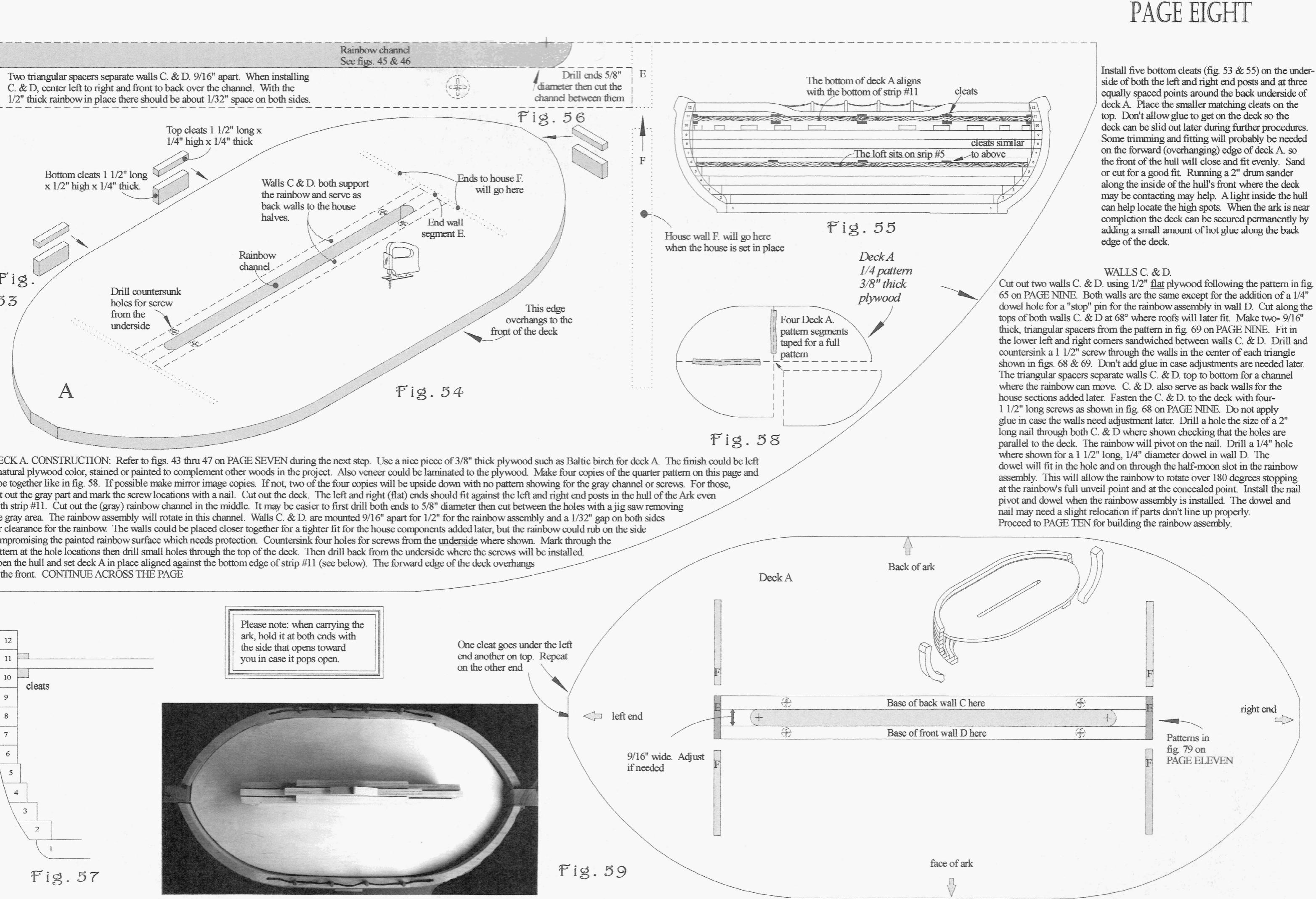
At the two joints where the three decorative strips meet, the angle may need a very slight adjustment so the trim will continue up and along the curved top of strips #12 (see note in fig. 22). The left and right patterns for this decorative strip are slightly longer than needed. Cut the ends of the strips for a good fit at a matching angle where the strip meets the end posts. Glue and clamp the decorative strips as they are bent around to meet the end posts.

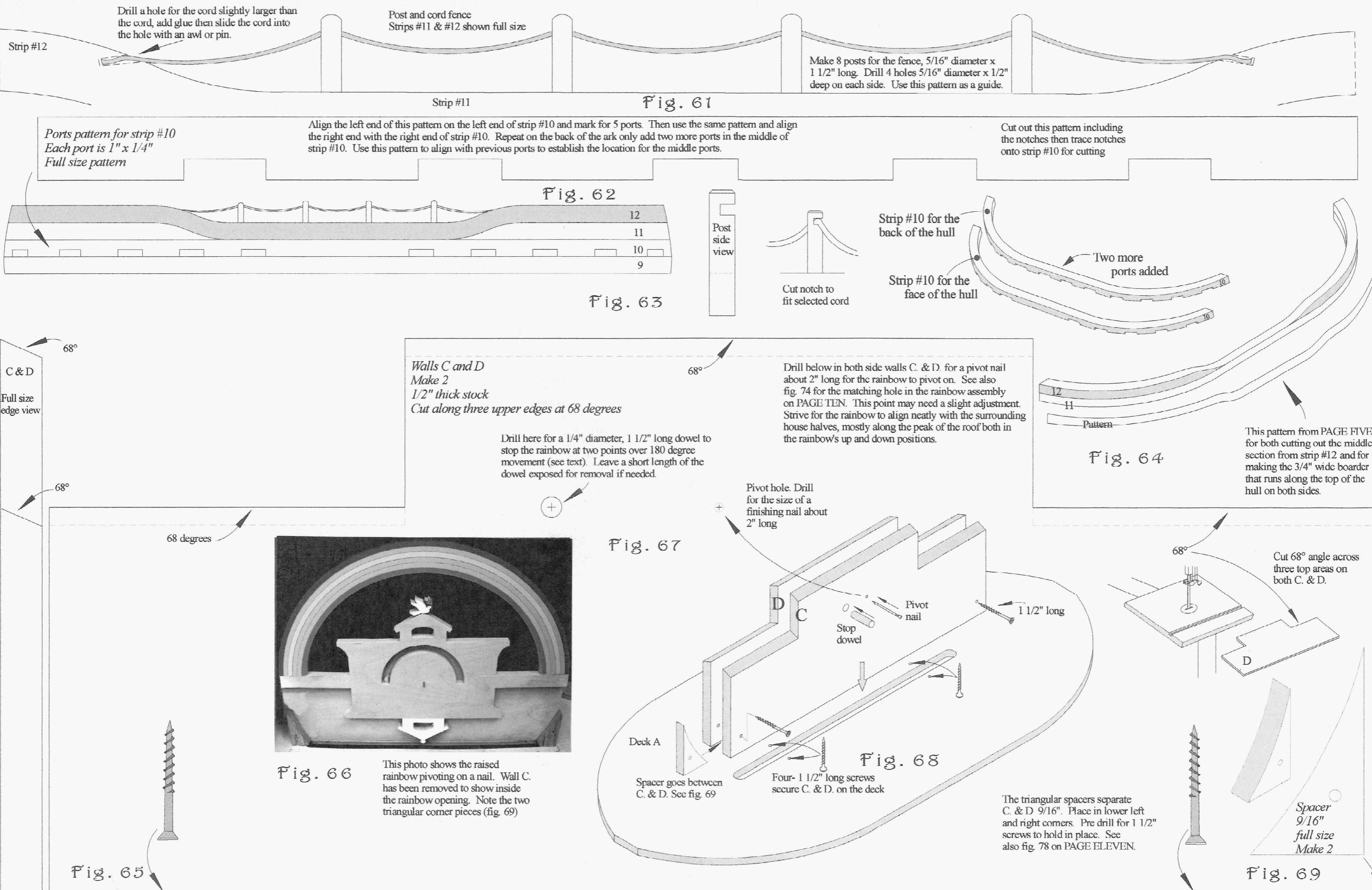
The face side of the ark should close neatly up against the end posts. Use your own latching approach, such as Velcro to hold the side closed or use recommended 3/4" diameter and 1/2" diameter Neodymium magnets on both ends of the face side of the hull. See figs. 36 & 39 on PAGE SIX. Fit a 1/2" diameter magnet in a 1/2" hole in the ends of strip #12 on the face hull. Place a 3/4" magnet in a matching point on both right and left end posts (fig. 36, PAGE SIX). Watch that the holes for the larger magnets in the end posts are not exposed to view when the hull is closed. Watch magnet polarity before they are glued so they attract and not repel each other. Magnets should be flush with their surface after Epoxy is applied.

Finish the back side of the hull similar to the top of the face of the hull including the decorative strip. A fence made with dowel posts and cords go in the recessed area on strip #11. They are placed on top of both sides of the hull and into strips #11 (full size in fig. 61, PAGE NINE). The posts are made from 5/16" dowels, 1 1/2" long and will be placed in 5/16" diameter holes drilled 1/2" deep. Drill the holes spaced like the full size drawings in fig. 61 and into strip #11. Cut a slot in the top backs of each dowel post to match the full size drawing in fig. 63. Glue with the slots to the back. If another color of wood is wanted for the dowel posts, fashion dowels following the same procedure shown for making the tiny dowels for the hull's simulated joints in fig. 40, PAGE SIX. Use cord, possibly the same used on the door/ramp to string from post to post. Drill holes in the curved ends of strip #12 for gluing the ends of the cord. See full size drawing in fig. 61. Drill slightly larger than the cord then neatly hot glue the cord ends in the holes with the cord draped as shown.

Continue to the text on PAGE EIGHT to build the ark's deck and rainbow assembly.







The top band on the rainbow is red. Possibly also color over the top of the arch with red as well.

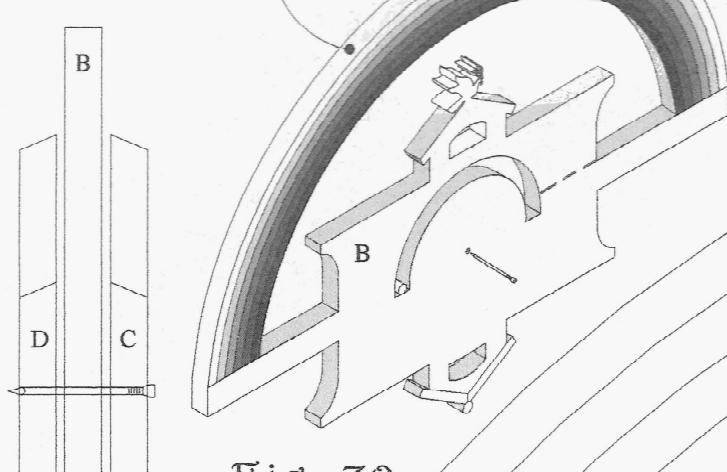


Fig. 70

Fig.
71

Cut out the cupola opening with a scroll saw, coping saw or cut in from the outside with a band saw like the other internal cuts on the rainbow assembly

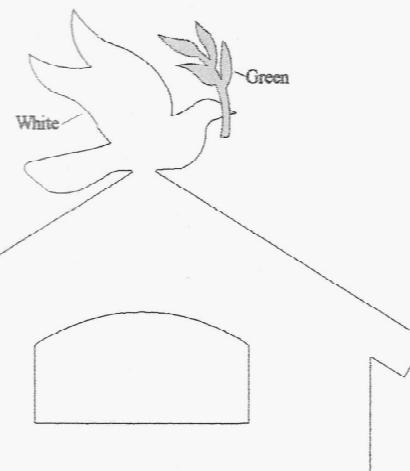


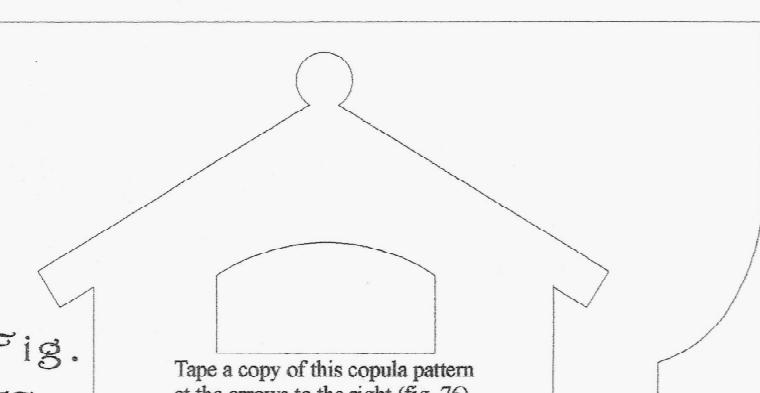
Fig. 71

Fig. 72

B
Rainbow assembly
1/2" thick stock
Use quality flat plywood

If the rainbow does not park precisely in the open or closed position, possibly file or cut the end points enough for a correct parking location. Or glue a wood tab if the travel is too far. Also fig. 67 & 68, PAGE NINE

← Grain →

Fig.
73

Attach copola pattern here



MAKING THE RAINBOW ASSEMBLY

The rainbow is a major feature of this project. Wait until friends and family see it rising from the ark. It will take some work and possible calibration while installing it. Make a copy of this page and apply the rainbow pattern to 1/2" thick flat stock. When installed the rainbow rotates clockwise one half turn to its upright position. Note the internal, "C" shaped arc. The rainbow comes to a stop at both ends of the arc as it makes contact with a 1/4" dowel inside the curved channel. The rainbow assembly could be stained or painted a desired color before adding the rainbow arc colors.

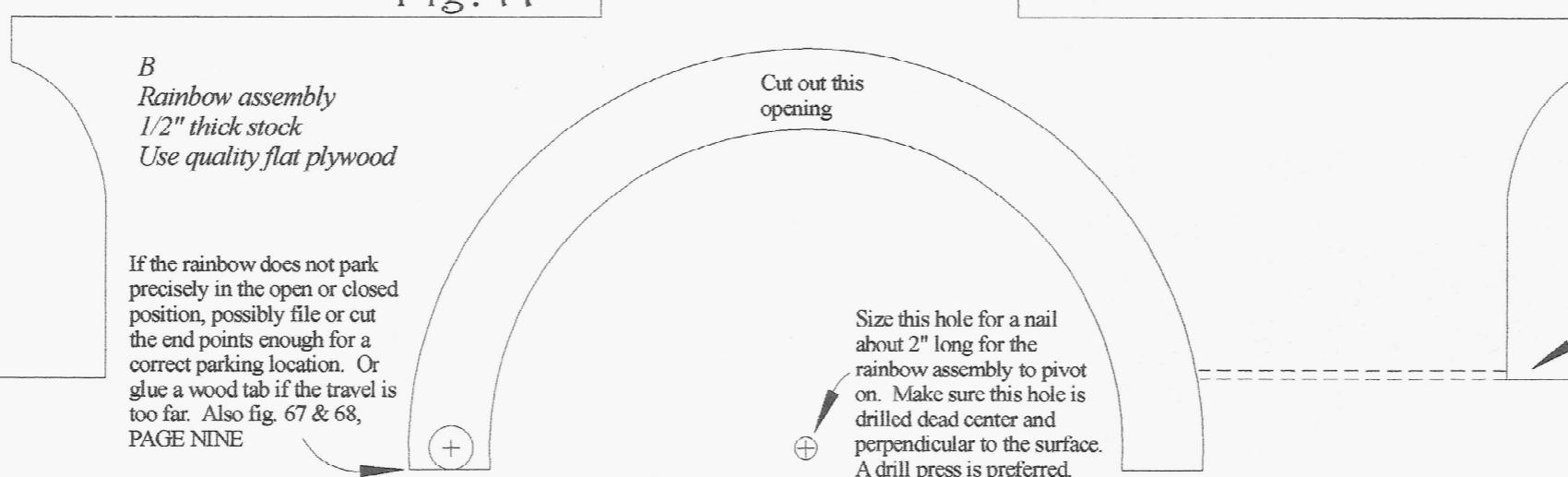


Fig. 74

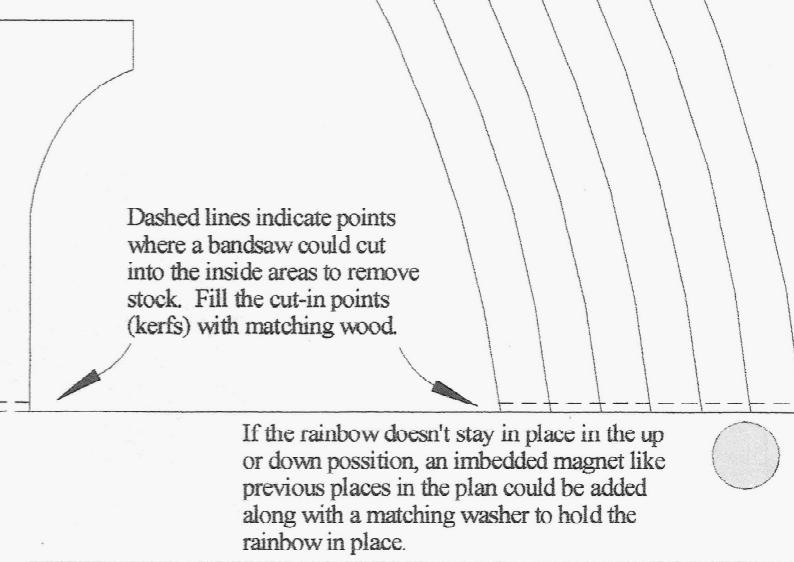
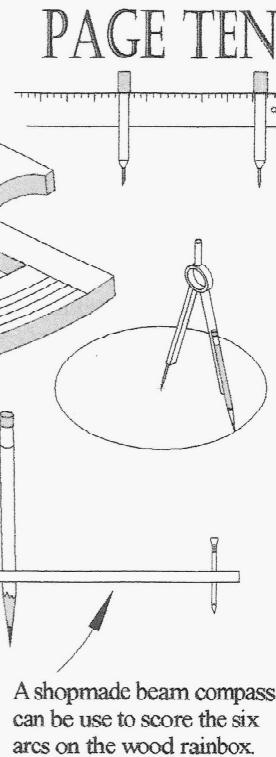


Fig. 75



A shopmade beam compass can be used to score the six arcs on the wood rainbow. Color between the lines.

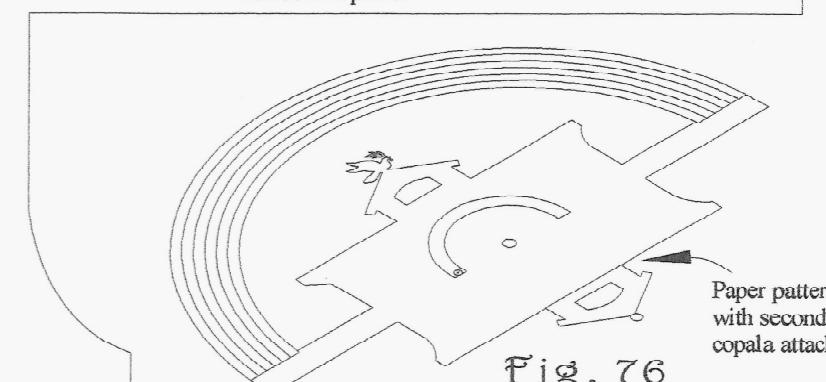


Fig. 76

Paper pattern with second copola attached

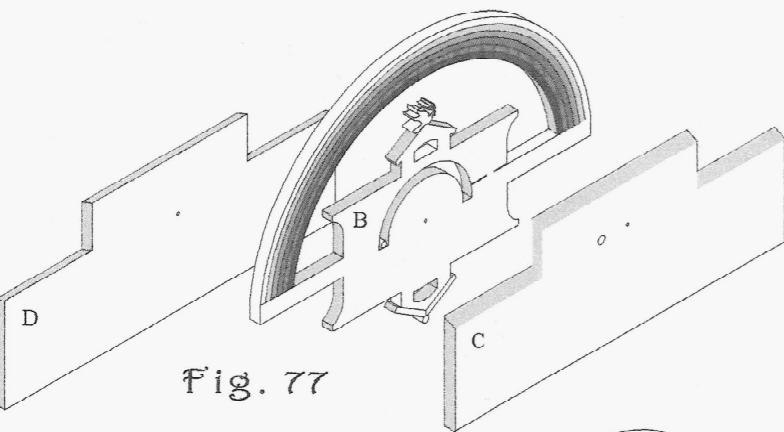


Fig. 77

The house on the deck has two sides. Both sides are the same. They fit up against walls C. and D. The full size patterns are on PAGES ELEVEN, TWELVE & THIRTEEN. Also study the sequential drawings on PAGE SEVEN. The house additions are not attached to the deck but are removable so they can be lifted off the ark to reveal the corrals and bird perches inside. All wall and roof parts are $1/4"$ thick. If working with contrasting woods, consider the windowed sections and end walls in one wood color and the roofs in another. It will be easier to cut out the windows by separating the (window) patterns for the front of each house at the dashed line. Then cut out the parts separately (fig. 85) including cutting out the windows then gluing the parts back together (fig. 82).

Because the house additions are somewhat fragile and could be removed often, it is suggested, after the house additions are glued and dry, that the joints be reinforced with a moderate bead of hot glue or epoxy along the inside joints.

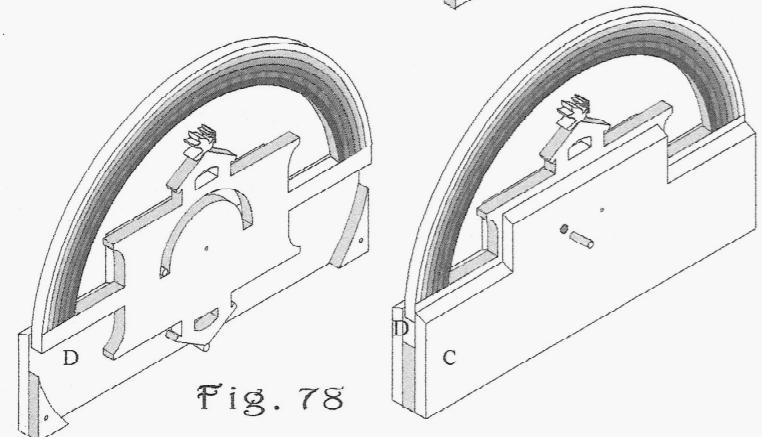


Fig. 78

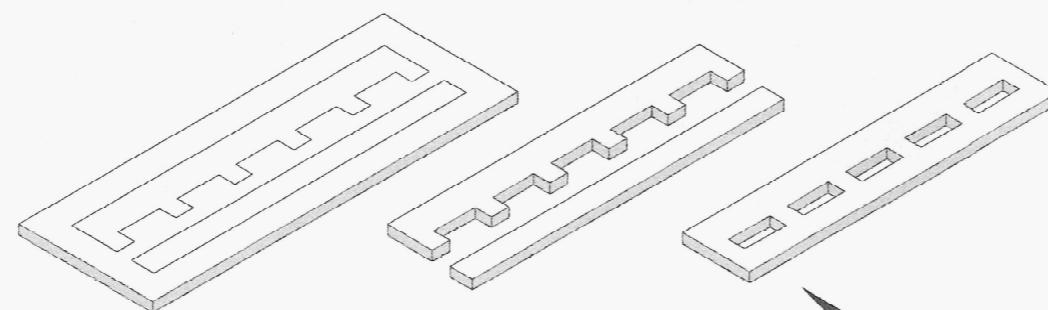
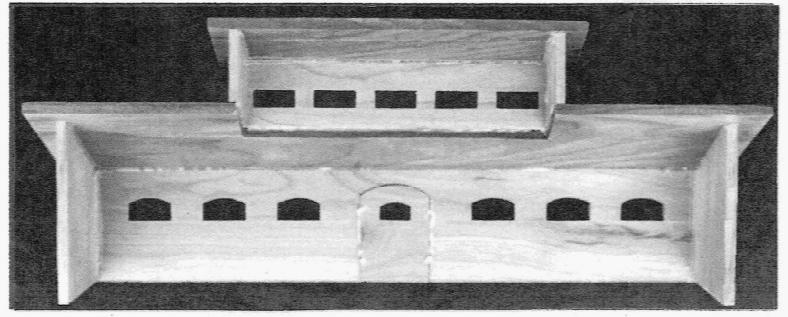
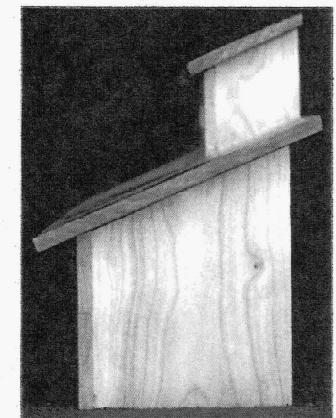


Fig. 82



When the house sections are done, wall F will slide up to and align with the edges of E.

F
Walls for the sides of the house addition's first floor
Full size
Make four $1/4"$ thick

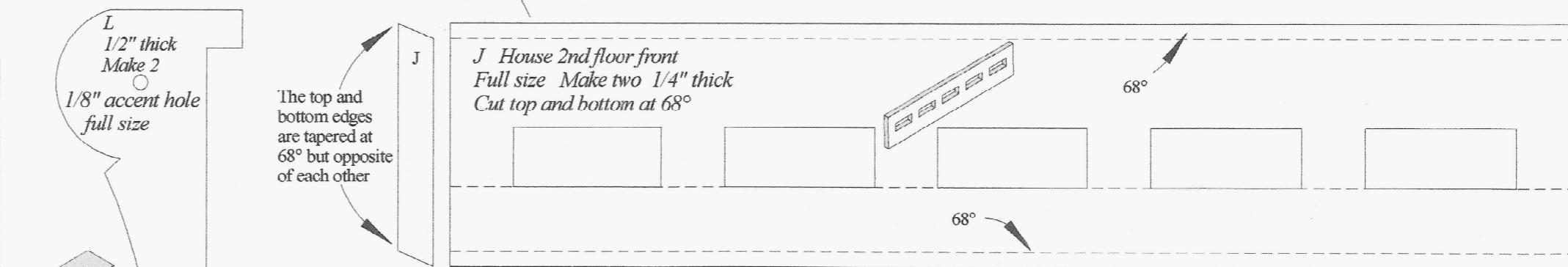
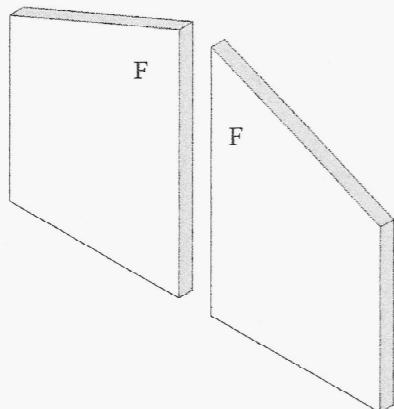


Fig. 84

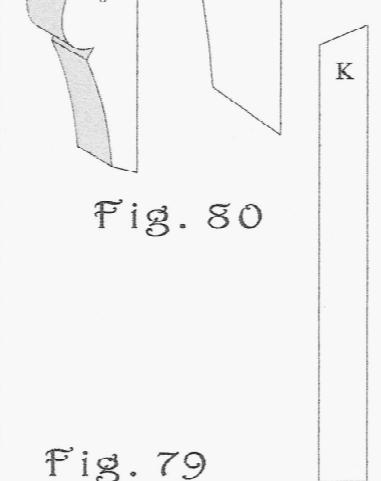
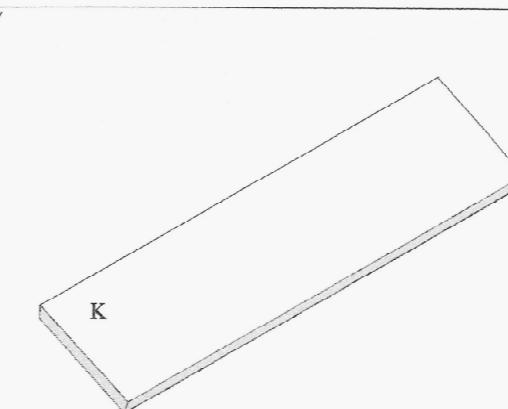
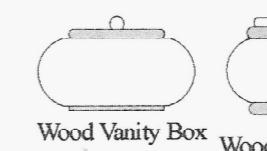


Fig. 79

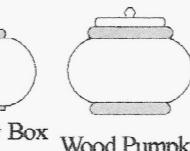
K
House 2nd floor roof
full size
 $1/4"$ thick
Cut along upper edge at 68°
Make two



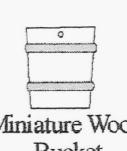
Some fun wood miniatures can be added throughout the Ark. Purchase from the internet including at: Try www.caseyswood.com



Wood Vanity Box



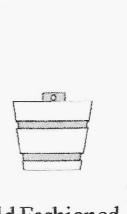
Wood Pumpkin Box w/cover



Miniature Wood Bucket



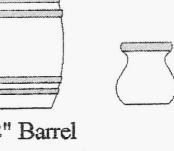
Pitcher



Old Fashioned Wood Rope Bucket

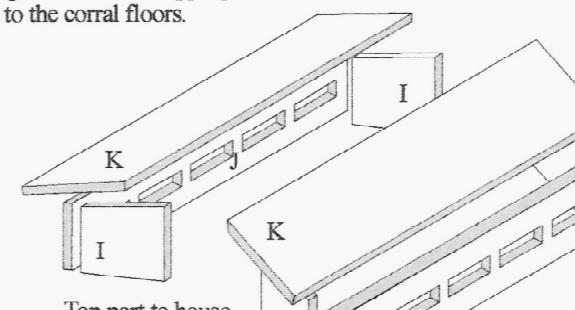


1 5/8" Barrel



Wood Round Bean Pot

Fig. 81



Top part to house

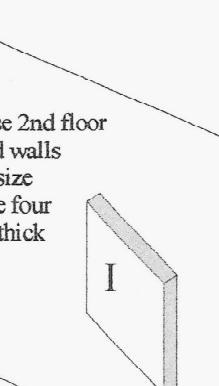
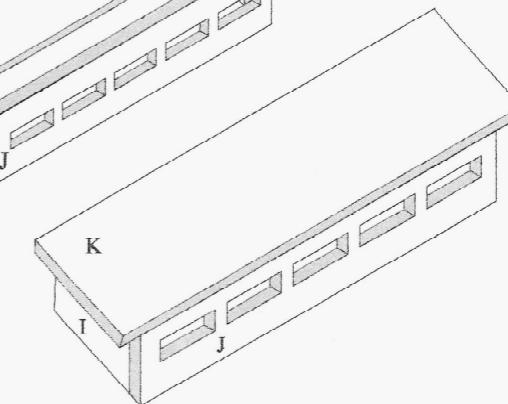
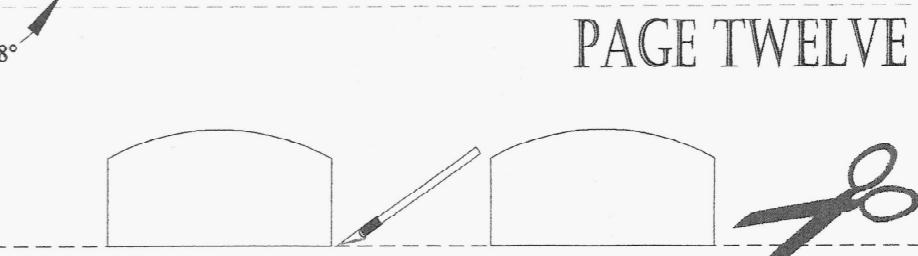
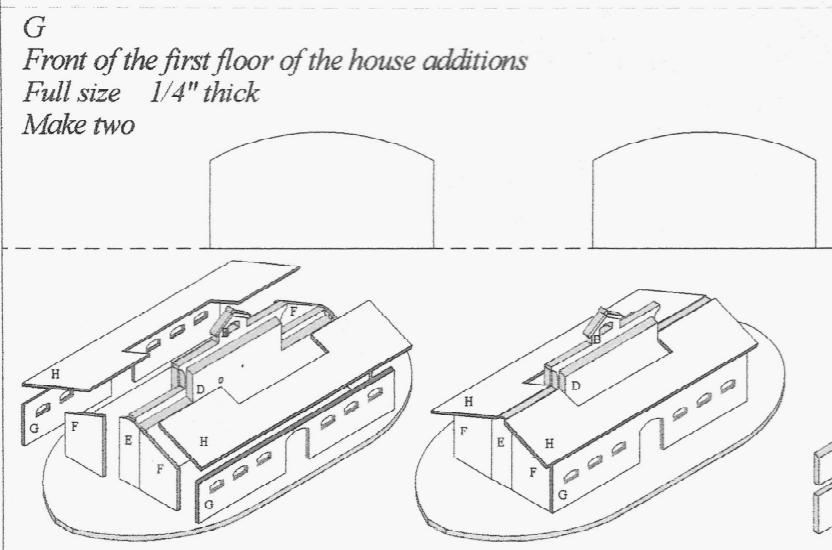


Fig. 83



The four (windowed) walls may be easier to make by first making a copy of the pattern then use scissors, Exacto knife, etc. and cut along the dashed line to separate the two halves. This will make it easier to cut out the windows in wall G. & J. Then glue the two halves together for one wall. If the part is too long to cut all the windows on your bandsaw, remove the pattern, flip the piece over, and align the pattern with the previously cut windows for further cutting.

Fig. 85

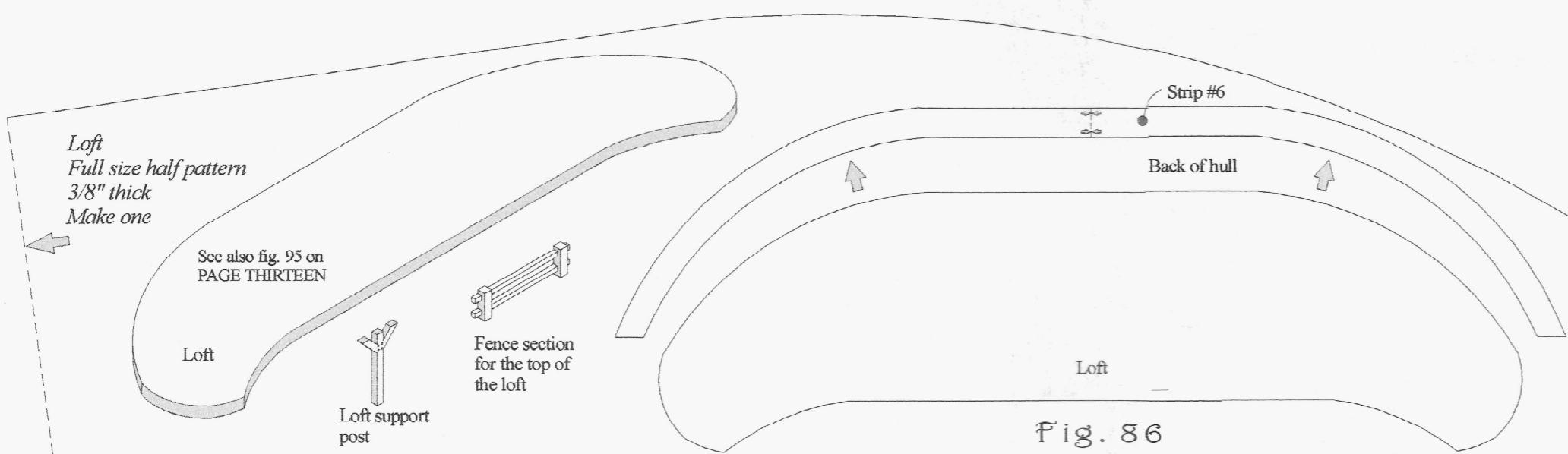


Fig. 86

Inside the hull is a second level or loft. The 3/8" thick, crescent shaped floor is attached in the back of the hull against strip #6 and down on the narrow edge of strip #5. See both drawings in fig. 7 on PAGE TWO. See also fig. 55, PAGE EIGHT and fig. 95, PAGE THIRTEEN. Make two copies of this pattern, tape together like previous patterns and apply to 3/8" thick plywood and cut. Sand down sharp edges on the overhanging edge. It may be easier installing this floor with deck A. above removed. Sand to fit then glue in place. Cut out five wall posts in fig. 99, PAGE THIRTEEN from 3/8" thick stock. If wanted add four dowel accents to each post following the same procedure as done on the outside of the hull. Space equally under the forward edge of the loft. Check that the loft is level and trim the five posts to length and glue in place. The left and right rounded ends of the loft project out slightly. Watch clearance as the face of the ark is closed and trim if necessary. Build two fence lengths in figs. 92 & 96 on PAGE THIRTEEN. Glue fences at the foreword edge of the loft on both sides of the rainbow cover (fig. 89).

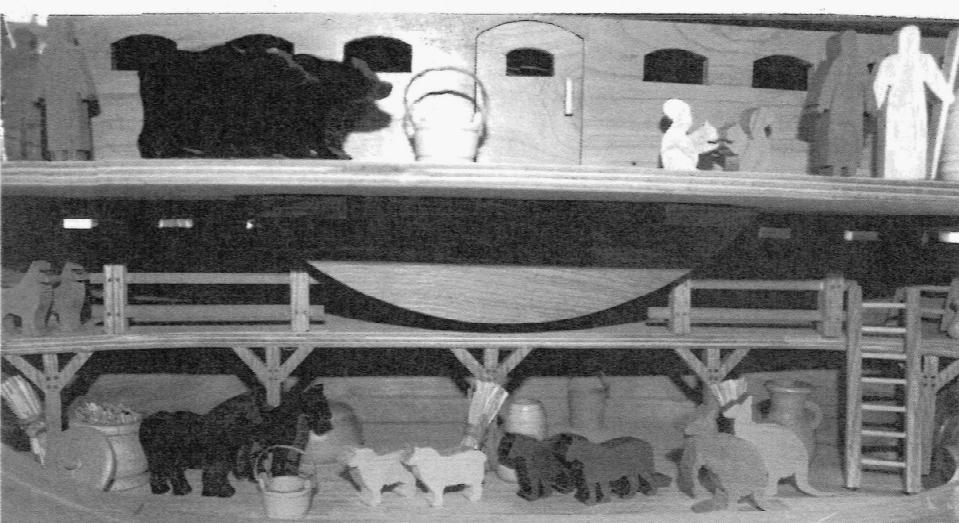


Fig. 89

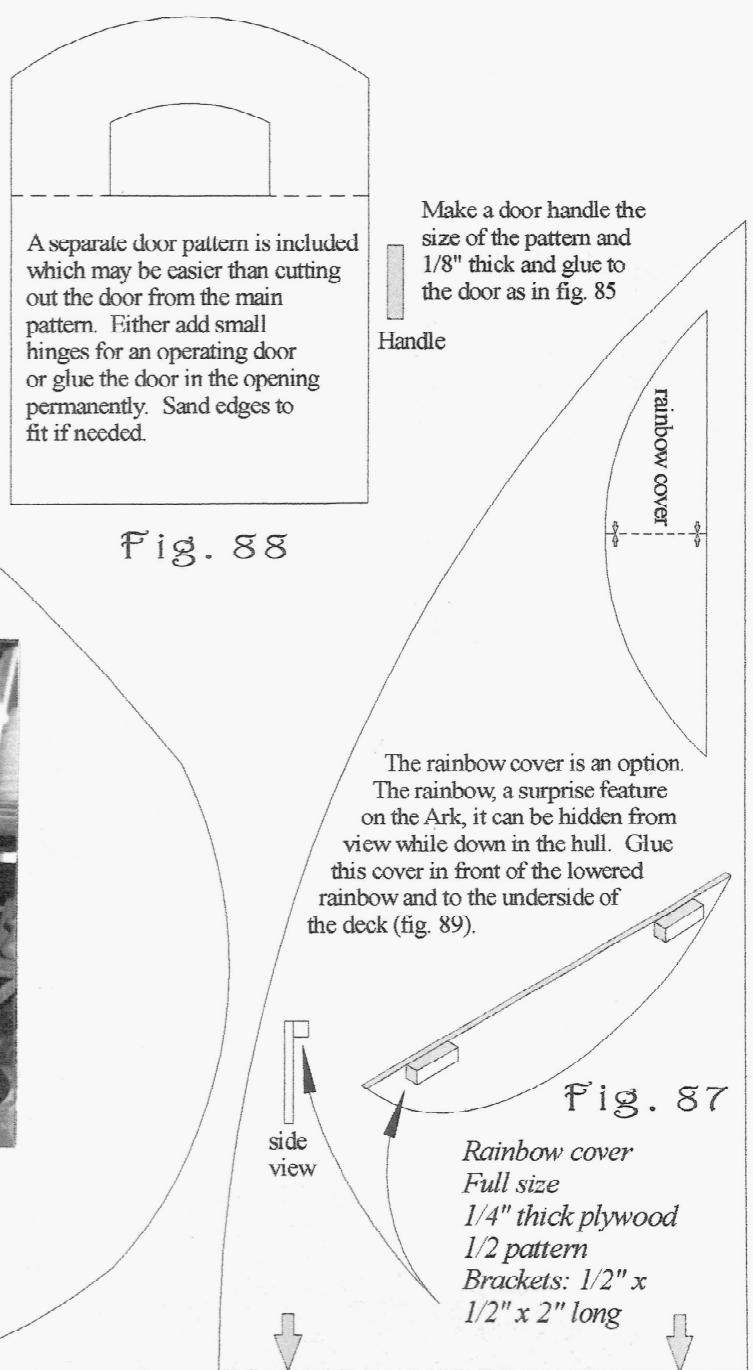


Fig. 87

Rainbow cover
Full size
1/4" thick plywood
1/2 pattern
Brackets: 1/2" x 1/2" x 2" long

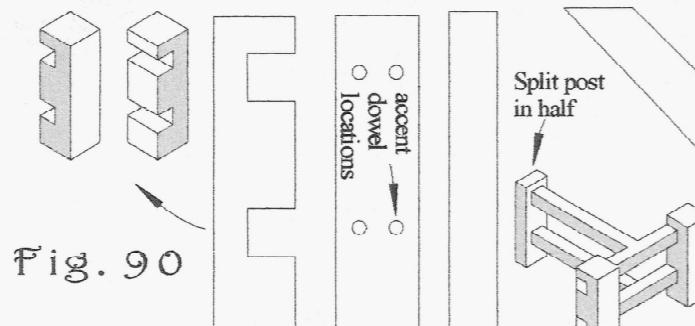
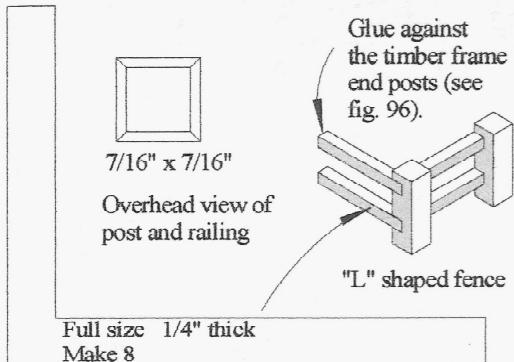
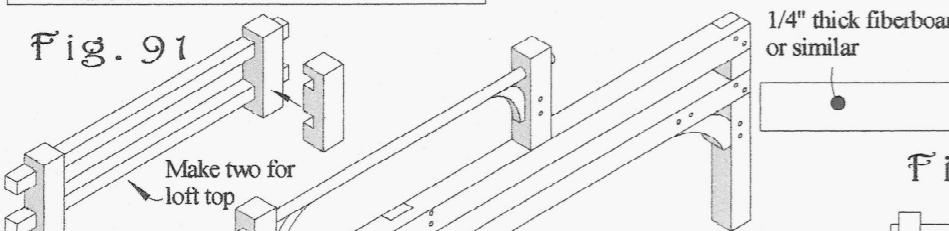


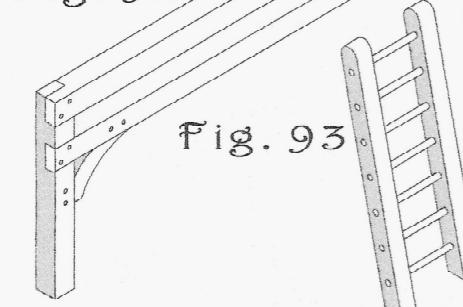
Fig. 90

Fig. 91



Straight fence

Fig. 92



Timber frame structure
Full size
Make two

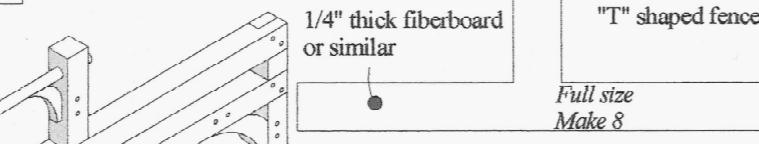
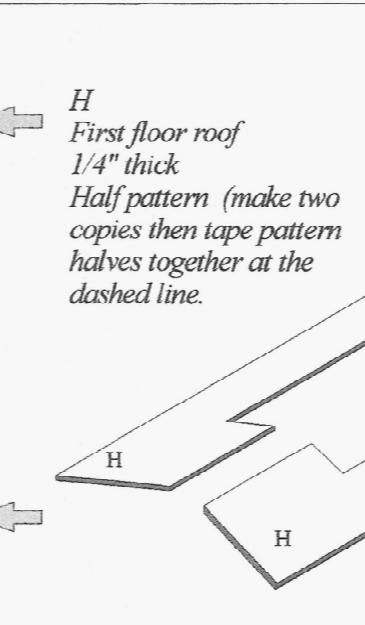
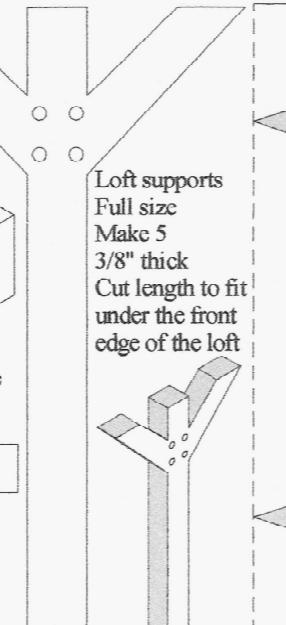


Fig. 93



Fig. 94



H
First floor roof
1/4" thick
Half pattern (make two copies then tape pattern halves together at the dashed line.)

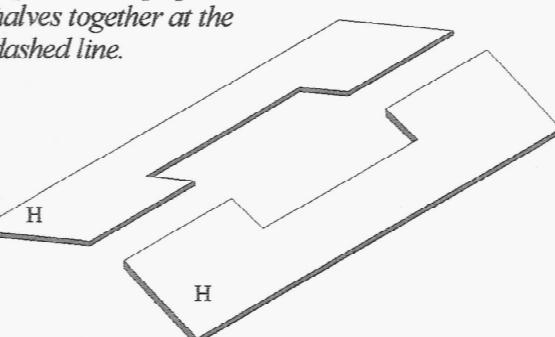


Fig. 99

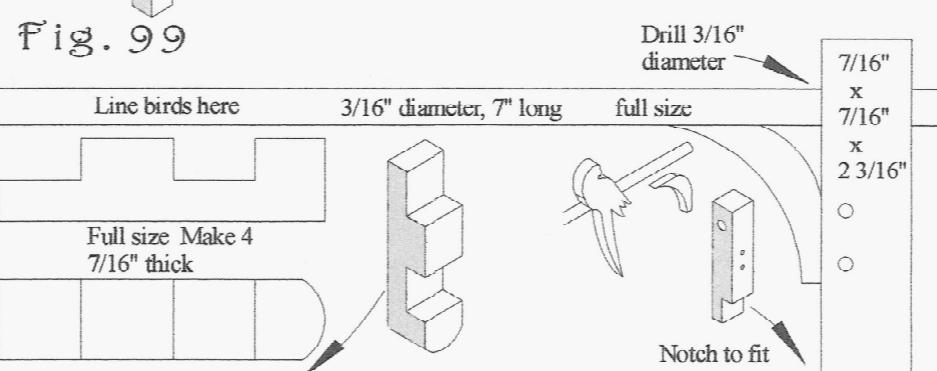


Fig. 98

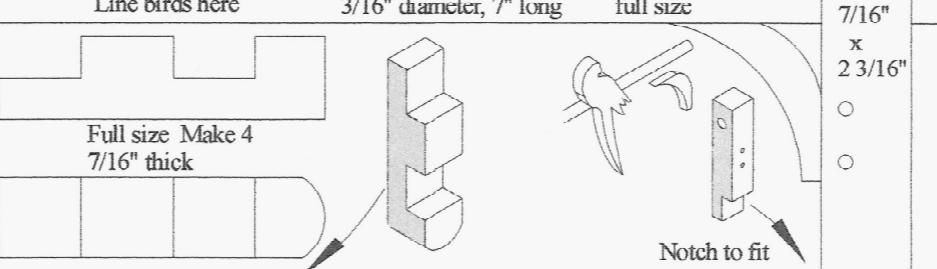


Fig. 99

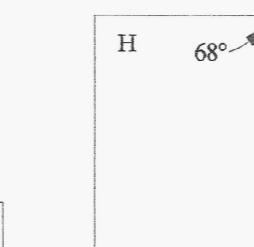
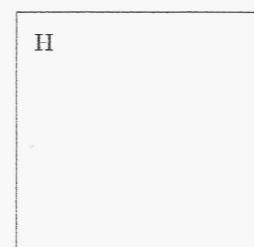


Fig. 100

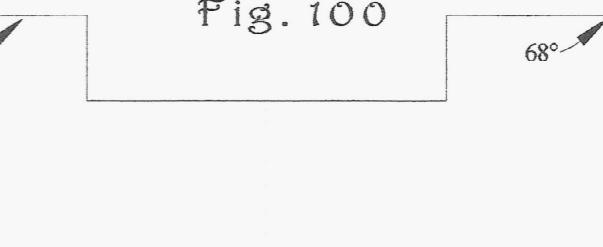
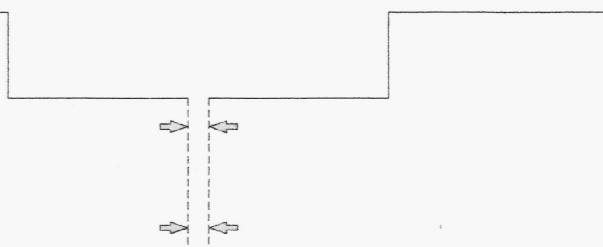


Fig. 101

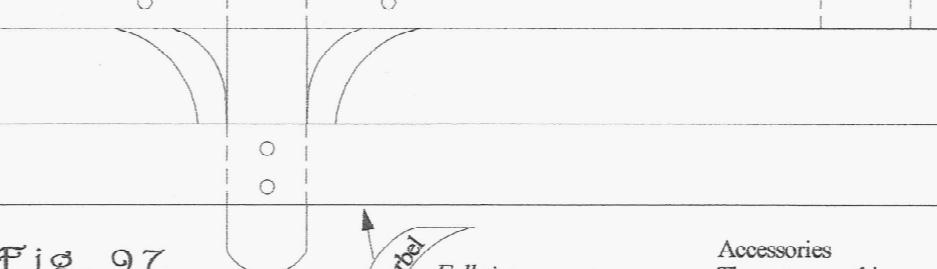


Fig. 102

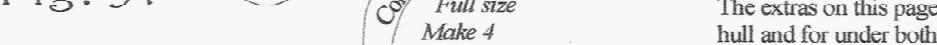


Fig. 103



Fig. 104



Fig. 105



Fig. 106

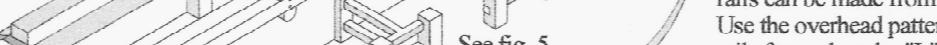


Fig. 107



Fig. 108



Fig. 109



Fig. 110



Fig. 111

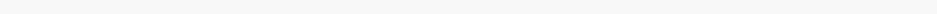


Fig. 112

Fig. 113

Fig. 114

Fig. 115

Fig. 116

Fig. 117

Fig. 118

Fig. 119

Fig. 120

Fig. 121

Fig. 122

Fig. 123

Fig. 124

Fig. 125

Fig. 126

Fig. 127

Fig. 128

Fig. 129

Fig. 130

Fig. 131

Fig. 132

Fig. 133

Fig. 134

Fig. 135

Fig. 136

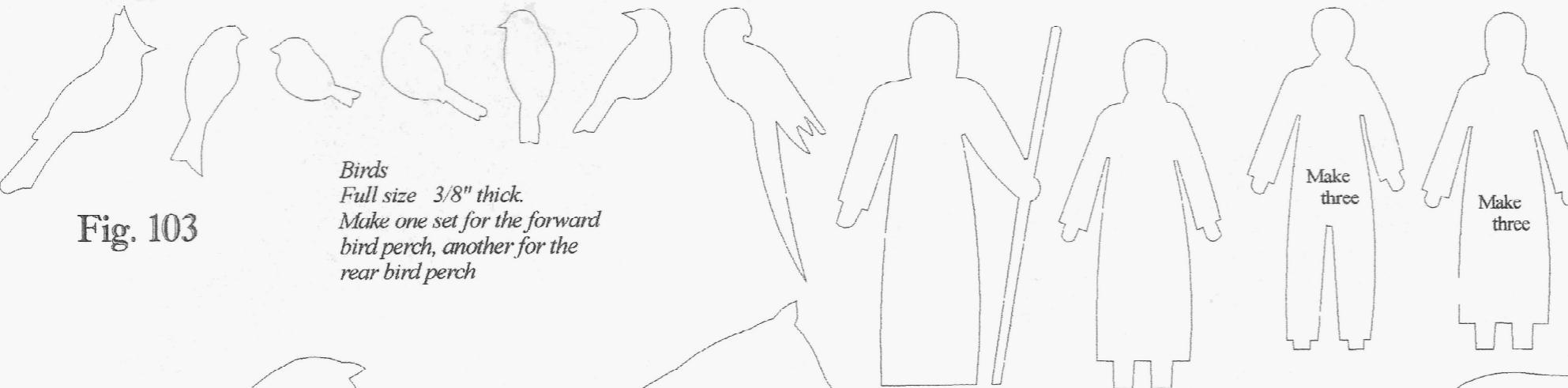
Fig. 137

Fig. 138

Fig. 139

Fig. 140

Fig. 141



Patterns on this page are for cutting out animals, birds, Noah, his wife, and their three sons and their wives. Cut out two of each animal except where noted. Use 1/2" thick plywood or solid wood. Figures could be scaled up or down on a copy machine. Even make the male animal slightly larger than the female. 1" thick solid wood could be cut then ripped down for two figures. Extra animals of your own design could be added. The figures can be made from assorted colors of wood. A few examples, the bears could be black bears fashioned from Ebony. Lacewood works well for giraffes with its spotted texture. And, of course, the Zebras from zebra wood. Some parts of the animals can be fragile. If making the ark for children's play, consider using 1/2" plywood for strength. Sand down sharp edges. Possibly paint in assorted colors. See animal books or the internet for colors for animals.

